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Understanding Performance Differences in Small Family Firms: A Resource-Based View.

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**UNDERSTANDING PERFORMANCE DIFFERENCES IN SMALL FAMILY FIRMS:
A RESOURCE-BASED VIEW**

A Dissertation

**Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy**

In

The Interdepartmental Program in Business Administration

**by
Janet B. Runge
B.P.A., Loyola University, 1982
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December 1998**

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DEDICATION

This dissertation is for my daughter, Camille Afton. I wish for you a sense of purpose and worth, and the perseverance to achieve your aspirations, whatever they may be.

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There are many people who have made the completion of this project possible. Without the support of my family and friends, this effort would have never been started, much less finished. Thank you Mo, Carol, Jim, Donna, Andy, and Ernie for getting me through this.

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ABSTRACT

This dissertation examined the resource-based view of the firm to explain performance differences among family businesses. How do resources impact strategy and performance in the family firm and what resources are important to strategy and performance in the family firm were the primary research questions. Hypothesized relationships between reputation and financial resources, between human resources, financial resources, and physical resources and strategic perspective, and between strategic perspective and performance were tested in sample of family owned/operated retail jewelry stores.

Structural equation modeling (LISREL 8) was used to develop to develop a measurement model and structural model to test the patterns of relationships between the study's constructs. Although indirect effects of resources on performance were the primary focus of the study, both direct and indirect effects were tested. Support was found for hypotheses linking human resources, measured as information processing capacity, and strategic perspective and strategic perspective and performance. In the nested model comparison process, an additional linkage, between reputation and performance, found support.

Results generally supported the resource-based view of the firm, thus validating its usefulness as a theoretical base for the study of family firms. For this sample, results indicated that some resources are more critical to firm performance than others, suggesting that successful firms can profit from configuring resources to exploit key resources. Further, family firms that use their information processing capacity to

broaden their strategic perspective exhibit stronger performance. Finally, the effect of resources in performance can be both direct and indirect, as was the case here with reputation.

CHAPTER 1

INTRODUCTION

There's a reason nepotism is making a comeback. In today's free-agent world, only family is forever (McCann, 1996).

Family businesses are a crucial part of the American economy. Estimates indicate that they account for 90% of the businesses in the U.S. and employ one-half of the work force in the private sector. When people think of family business, the "Mom and Pop" operation often comes to mind, but family firms can also be very large corporations. Approximately 35% of Fortune 500 companies are family managed, owned, or controlled (e.g. Levi-Strauss, Johnson & Johnson, and Wal-Mart).

Family businesses are often short-lived. Only 30% of family firms weather the transition from founder to second generation. Approximately 10% make it to the third generation. The average life expectancy of a family business is 24 years, the average tenure of most business owners (Beckhard & Dyer, 1983). The small percentage of third generation family businesses is testimony to the difficulty of sustaining firm interests and capabilities. Thus, research examining the family firm has the potential to improve the long-term prospects of family businesses.

Despite the daunting prospects for family firm survival, their study has been largely neglected. One explanation is that social scientists have accepted the idea that control of businesses lies with professional management rather than families. Also, the difficulties inherent in trying to study both family and business systems simultaneously have inhibited their exploration (Brockhaus, 1994; Lansberg, Perrow, & Rogolsky,

1988; Daily & Dollinger, 1992). This is disturbing because it has limited the study of a vital sector of our economy, a sector about which we know so little.

Definition of Family Business

The family business is a unique type of enterprise for which any definitions have been offered. However, there still is no commonly accepted definition of family business. Existing definitions of family business can be grouped according to their similarities (cf. Handler, 1989). Some have labeled family firms based on the degree of ownership and/or management by family members (cf. Barnes & Hershon, 1976; Dyer, 1986; Lansberg, Perrow, & Rogalsky, 1988) while other researchers have focused on the level of family involvement in the business (cf. Davis, 1983; Beckhard & Dyer, 1983). Another perspective on defining family business examines the potential for intergenerational transfer (cf. Ward, 1987; Churchill & Hatten, 1987). Still yet another group believes that all of these defining characteristics have merit, and so they combine aspects of these definitions (cf. Rosenblatt, de Mik, Anderson, & Johnson, 1985).

This dissertation adopts the view that the definition of family business should consider multiple characteristics in order to capture the inherent complexity of this type of firm. Thus the definition of family business used in this dissertation will be:

Family businesses are those firms 1) whose ownership and/or management is controlled by members of a single family, 2) in which interaction between family and business systems establish the basic character of the firm, and 3) in which the link between family and business has a mutual influence on company policy and on family interests and objectives.

Unresolved Issues in Family Business Research

Despite the importance of family businesses, they have not been closely examined. In fact, what we don't know about family businesses greatly exceeds our current knowledge. First, a problem closely associated with family business issues is a lack of clear boundaries between family business and other areas of study (Wortman, 1994). Family business has an overlap with small business as well as with entrepreneurial firms (Brockhaus, 1994). It would be accurate to describe the family business and entrepreneurial firms as independent - but overlapping - domains (Hoy & Verser, 1994). In fact, study has shown that there are differences between family firms and other businesses (Harris, Martinez, & Ward, 1994). Family businesses are characterized by slower growth and less participation in international markets (Gallo, 1993), are less capital intensive (Friedman & Friedman, 1994), and operate with lower costs (McGonaghy, Walker, & Henderson, 1993) and longer-term commitment (Danco, 1975). They have a greater concern for employee care and loyalty (Ward, 1988), as well as concern for family harmony (Trostel & Nichols, 1990).

A second issue is that most of the research on family firms has been confined to the succession decision. However, the survival issue is one that family businesses may face only once in an owner's lifetime (Hoy & Verser, 1994; Hoy, 1992). Thus, most of our knowledge about family businesses pertains to just one type of decision. Less developed research areas include family involvement in the firm and the role of a board of directors in a family business (Dyer & Handler, 1994). However, this research has been conducted primarily by consultants, financial advisers or family therapists

(Brockhaus, 1994; Lansberg, Perrow, & Rogolsky, 1988). This is a problem because lack of theoretical grounding and secondary attention to research construction and method raises questions about the validity and generalizability of their conclusions. Another issue is that much of the work in the family business area has not been grounded in theory. Academic contributions to the study of family firms represent only a small portion of the family business research stream. Much of this research resides outside the business domain, coming largely from the fields of family systems and family therapy, addressing issues such as conflict management within the family firm (Dyer & Handler, 1994; Handler, 1989). The most notable contribution to the study of family business from strategic management has been the importance of organizational and industrial life cycles (e.g. Peiser & Wooten, 1983; Hofer, 1975). For the family business, relationships between firm, industry, and family life cycle are conceptualized as significant to long-term success (Pascarella & Frohnan, 1990; Peiser & Wooten, 1983; Barnes & Hershon, 1976). However, only two studies have examined life cycle effects empirically (Ward, 1988; McGivern, 1989). Little empirical work has been conducted to demonstrate a connection between family involvement and performance.

In summary, the management literature is just beginning to focus on family business with efforts to date being limited to succession and family issues. Hence, many opportunities exist to greatly expand our understanding of family business. We still know little about performance differences between family firms, the role of managers in the family firm, or family firm strategy formulation and implementation processes. Much of the research has been anecdotal or is not grounded in strategic

management theory. Hence, family businesses provide fertile terrain for the application of strategic management theory.

Resource-based View of the Firm

Strategic management has the potential to inform family business leaders about factors that are critical to their firms' long-term survival and success. Day (1992) suggests examinations of family business have not tapped this potential, however. This dissertation adopts the view that understandings about the family firm can be enriched by drawing on the conceptually well-developed, organizationally-based theories housed within the strategic management research stream. The resource-based view is especially lucrative for the study of family business because it recognizes the strategic importance of behavioral and social phenomena that enable firms to both formulate and implement their strategies (Barney & Zajac, 1994; Barney, 1991). Rather than a static analysis of firm strengths, weaknesses, opportunities, and threats, the resource-based view is dynamic, considering both strategy content and process (Schendel, 1994). This dissertation examines performance in the family firm through the use of the resource-based view of the firm.

The resource-based view defines resources as those tangible and intangible assets tied semi-permanently to the firm (Wernerfelt, 1984). Dierickx and Cool (1989) state that managers often do not realize that a bundle of assets, rather than the particular product/market combination chosen for its deployment, lies at the heart of their firm's competitive position. Further, they suggest that little is done to protect these assets.

Much of the research drawing on concepts of the resource-based view has focused on large corporations and diversification decisions. Empirical studies on large diversified organizations have shown that the resource-based view offers a valuable means of understanding performance, and have generated a call for closer attention to a firm's internal attributes and their measurement (Robins & Wiersema, 1995; Levinthal & Myatt, 1994). A vast potential remains, therefore, to increase our understanding of the family firm by utilizing the resource-based perspective.

Theoretical Model

Based on their complementary potential, this dissertation will examine the resource-based view of the firm to explain performance differences among family businesses. The research questions addressed are twofold:

1. How do resources impact strategy and performance in the family firm?
2. What resources are important to strategy and performance in the family firm?

The relations proposed in this dissertation are presented in Figure 1. The model presented argues that resources, both tangible and intangible, are critical to performance in the family firm. Schendel (1994) calls these resources "compound assets." Examples of tangible resources may include capital and technology while intangible resources may include factors such as legitimacy and strategic identity. Consistent with the resource-based view, tangible and intangible resources directly influence the strategic actions a firm undertakes, and thus indirectly influence firm performance. For example, a firm's legitimacy and capital might enhance its ability to diversify into other products or markets successfully.



Figure 1
Theoretical Model

In summary, the thesis of this dissertation, depicted in Figure 1, is that the assembly of resources is a critical determinant of family business performance. The study contained herein has the potential to make several notable contributions. These are discussed in the following section.

Potential Contributions

Although first conceptualized by Penrose (1959), empirical validation of the resource-based view of the firm has been scarce. Lippman and Rumelt (1982) suggested that it may never be possible to produce a complete, unambiguous list of the resources that are responsible for firm success, and thus perhaps slowed the identification of such resources by scholars. Currently, extant literature offers little insight as to what those resources might be and how they might be developed. This gap in the research stream, in tandem with the finding that firm-specific factors are more important in determining firm performance than industry or economic factors (Rumelt, 1991; Hansen & Wernerfelt, 1989), suggests that more work is needed here.

Finally, this dissertation will make a contribution in its rigorous approach to family business research. In sharp contrast to existing research in family business, the study will be grounded in strategic management theory. Specifically, causal modeling of the resource-based view of the firm is used to explore performance differences among family firms.

In summary, the contributions of the study to strategic management research are:

1. A rigorous exploration of the resource-based view.
2. A study of family business grounded in strategic management theory.

CHAPTER 2

LITERATURE REVIEW

The resource-based view of the firm offers a valuable means of understanding performance in family firms. After a brief review of the family business strategy literature, this chapter examines the central concepts behind the resource-based view. The importance of both tangible and intangible resources will be discussed. To better elucidate the relationship between resources, strategy, and firm performance, use of the theory in previous studies will also be reviewed.

Research on the Family Firm

Although family businesses have been studied for over twenty years, interest in this area has boomed since the mid-1980's. The growing understanding of the importance of family business in the economy together with recognition that family firms have substantive differences from other businesses fueled this growth. To date, the largest contributors to the study of family firms have been the disciplines of psychology and sociology. Theoretical work has focused on development of frameworks on structural issues, such as the integration of family and business systems (c.f. Kepner, 1991) and family firm development (c.f. Hollander & Elman, 1988) (Wortman, 1994). Because family firms provide the context of this study, a brief overview of the family firm literature follows.

Empirically, family firm strategy studies have been few in number. Wortman (1994) identified just 26 such studies in the ten year period between 1982 and 1991. These studies encompassed a variety of industries and half focused on firms in countries

other than the United States. Questionnaires, case studies, and interviews were the methods most utilized. Interestingly, despite the preponderance of empirical researchers from psychology, sociology, and even economics, statistical rigor in family business studies has been sorely lacking. Of the 26 studies cited by Wortman in his review, half did not include any type of data or statistical analysis. Most of the studies applying some type of analysis used relatively unsophisticated techniques, such as percents, means, correlations, and t-tests (Wortman, 1994).

The bulk of studies have dealt with structural design of the family firm, primarily examining family firm succession issues (Wortman, 1994). Conceptually, succession studies have covered a range of issues, including the critical issues facing founders and successors in providing continuity for the family firm (Beckhard & Dyer, 1983), the transfer of power in the family firm (Barnes & Hershon, 1976), and sustaining family management in succession (Friedman, 1991). Other conceptual work has highlighted factors contributing to resistance to succession (Handler & Kram, 1988) and barriers to succession planning (Landsberg, 1988). Empirical studies have investigated variables influencing succession, including owner motivation, firm development stage, extent of family involvement, and business environment (McGivern, 1978), the corporate context and departure styles of family firm CEOs (Sonnenfeld & Spence, 1989), and the individual and relational influences between generations in succession (Handler, 1990).

Another structural concern in empirical studies has been the importance of a board of directors for the family firm. Studies have explored the types of boards

utilized by family firms, their practices and agendas (c.f. Ward & Handy, 1988) as well as the value of boards and the role of outsiders (c.f. Schwartz & Barnes, 1991).

Family firm development studies have borrowed more heavily from the strategic management literature, focusing on life cycle perspectives of family, organization, and industry. For the family business, relationships between firm, industry, and family life cycle are conceptualized as significant to long-term success (Pascarella & Frohnan, 1990; Peiser & Wooten, 1983; Barnes & Hershon, 1976). However, only two studies have examined life cycle effects empirically (Ward, 1988; McGivern, 1989).

In sum, despite increasing interest in family firms, much work remains to be done. Family business research has been limited by the lack of unifying conceptual work and focus on a narrow range of topics. While much knowledge has been gleaned from many other fields, such as family counseling, there has been little integration of these contributions into a single body of definitions and theory. Further, the strategic management literature has been largely absent in the study of family firms, to the detriment of both areas. The family firm literature can benefit from building upon the rich theories developed in strategy. As well, the strategy field can benefit from studying a population of businesses different from the large corporations featured in many strategy studies (c.f. Bergh, 1995; Robins & Wiersema, 1995).

Empirical studies of family firms parallel the limitations associated with the conceptual work. A limited range of topics has been addressed and scant attention devoted to ascertaining connections between family involvement in a business and performance. This provides a substantial opportunity for integration of the strategic

management literature and its focus on performance with the study of family business. Further, the limited degree of methodological and statistical sophistication suggests that the complexity inherent in family businesses has not been adequately captured.

Resource-based View of the Firm

At the heart of strategic management is understanding firm performance. An important contribution is the resource-based view of the firm. This perspective highlights the importance of the manager and links performance to the development and utilization of firm resources. The resource-based perspective assumes that firms can develop competitive advantage through actions taken by strategic leaders in combining firm resources (Lado, Boyd, & Wright, 1992).

Although the resource-based view has only recently begun to receive serious attention in the strategy literature (c.f. Wernerfelt, 1984; Barney, 1986), its roots are extensive. Barnard (1938) first outlined the importance of a preeminent resource, the general manager, to the organization. Schumpeter (1934, 1950) discussed the idiosyncratic competencies developed by the entrepreneur to identify and respond to unmet customer needs. Selznick (1957) described the leadership capabilities that lead to firm success, labelling them distinctive competencies.

The theory moved beyond the role of the administrator through the work of Penrose (1959). In addition to managerial resources, she suggested that firms are collections of productive resources, such as employee capabilities and capital equipment. Penrose anticipated later work (c.f. Rumelt, 1991; Hansen & Wernerfelt, 1989), suggesting that resources accumulated by the firm, deployed by managers, and

then further developed by the firm, were determinants of a firm's market choice and profitability. In other words, Penrose suggested that firm growth was limited only by its internal management resources, such as managerial experience and vision.

Resources have also been central to other works that form the bedrock of today's conceptions about strategy. The assessment of internal organizational capabilities (strengths and weaknesses) constituted half of the influential LCAG policy framework (Learned, Christiansen, Andrews, & Guth, 1965). Hofer and Schendel (1978) defined distinctive competence as the unique competitive position achieved by a firm through its resource deployment and emphasized the importance of competencies in firm strategy.

The resource-based view has also found favor among economists. In particular, Schumpeterian and transactions cost economists have recognized the importance of understanding firm-level behaviors (c.f. Nelson & Winter, 1982; Williamson, 1975). Schumpeterians consider competition to involve the continual search for new ways of deploying a firm's unique resources in response to environmental change (Mahoney & Pandian, 1992; Rumelt, 1984). Transaction cost economists recognize that resource combinations are impacted by a firm's manipulation of transaction costs (Williamson, 1991).

Indeed, the resource-based view has borrowed much from economics (e.g. asset specificity, the need for production and distribution efficiency, the possibility of sustainable above-normal returns (Conner, 1991)). Hence, much of the current

literature stream has a strong economic flavor (c.f. Lippman & Rumelt, 1982; Dierickx & Cool, 1989; Peteraf, 1993). The strength of this literature, however, is that it moves beyond the static economic view to incorporate the dynamics of behavioral and social phenomena that are critical to the formulation and implementation of firm strategy (Barney & Zajac, 1994; Schendel, 1994; Barney, 1991).

In summary, the resource-based view of the firm has implicitly and explicitly been a strong contributor to strategy research. The early strategy literature focused on a static view of firm capabilities, recognizing that the resources a firm possessed impacted its ability to respond to opportunities and threats in its markets. Contributions to the resource-based view from economics have helped shape a static model into a dynamic model that incorporates both strategy content and process.

The focus of the resource-based view is understanding a firm's competitive advantage through the link between its internal characteristics and performance (Barney, 1991). This perspective suggests that the "type, magnitude, and nature" of a firm's resources are key determinants of its profitability (Amit & Schoemaker, 1993). There are three important elements in the resource-based view. First, each firm is considered to be a collection of resources that provide the foundation of firm strategy and profitability. Second, firms acquire and develop unique resources and capabilities. These are believed to be causally ambiguous, unable to be understood by other firms and sometimes by the firms in which they are developed. This concept of heterogeneity emphasizes that firms within an industry will differ in the strategic resources they

possess (Barney, 1991). Third, the resource-based view assumes that resources may not be highly mobile across firms (Barney, 1991). Thus, differences in resources, which other firms cannot duplicate, are at the heart of competitive advantage.

Definition of Resources

Resources have been defined many ways, reflecting the differing perspectives that have influenced the resource-based view. For example, Wernerfelt (1984: 172) defined resources as "anything which could be thought of as a strength or weakness of the firm." Amit & Schoemaker (1993) defined resources as stocks of available factors owned or controlled by the firm which are converted into final products through use of a wide range of other firm assets and bonding mechanisms. Barney (1991) further argues that resources must be valuable, rare, imperfectly imitable, and non-substitutable to be a potential source of sustained competitive advantage.

The definition used herein is consistent with Daft (1983) and Barney (1991), that firm resources are those factors (including assets, capabilities, organizational processes, firm attributes, information and knowledge) controlled by the firm that enable it to conceive and implement strategies for improvement of its performance. This definition has been selected because while some make a distinction between narrowly defined resources and capabilities (c.f. Amit & Shoemaker, 1993), it is agreed that both contribute to a firm's competitive advantage. The broader definition used here reduces semantic confusion, encompassing both resources and capabilities.

Types of Resources

Adherents to the resource-based view argue that the resource combinations of a firm impacts the development of its strategy and ultimately its performance (Chatterjee & Wernerfelt, 1991; Grant, 1991). It has been suggested that designing strategies that make the most of a firm's resources is the essence of strategy formulation (Grant, 1991). The resource-based literature classifies resources as tangible or intangible. Thus, the discussion here will highlight various categories of tangible and intangible resources.

Tangible Resources

Resources that can be seen, touched, or quantified are considered tangible. These can be grouped into four general categories: financial, physical, human, and organizational (Barney, 1991; Grant, 1991). Because of their measurability, tangible resources, particularly financial and physical resources, have featured most prominently in resource-based studies.

Financial resources include a firm's debt capacity and its ability to raise funds through equity offerings or retained earnings. These resources can impact a firm's strategy in a number of ways. At the corporate level, financial resources enable a firm to diversify into either related or unrelated markets (Chatterjee & Wernerfelt, 1991). At the business level, financial resources can fund the product and process innovations of differentiation strategies or the production efficiencies of cost leadership strategies (Porter, 1980).

Physical resources include a firm's plant, equipment, and location, as well supplies of necessary inputs for production. These resources are characterized by fixed

capacity. These resources will impact a firm's strategic choices. For example, excess capacity offers potential for diversification into related markets (Chatterjee & Wernerfelt, 1991) or may signal a need to retrench.

Human resources are composed of the training, experience, judgement, intelligence, relationships, and insight of individuals within the organization (Barney, 1991). At the top levels of management, managerial values and competencies define the strategic focus of the firm, selectively identifying strategic issues (Hambrick & Mason, 1984; Dutton & Jackson, 1987). At lower levels in the firm, the input from lower level managers and employees, based on their knowledge and skills, can lead to a firm's decision to adopt differentiation or efficiency strategies (Ginsberg, 1994).

Organizational resources stem from the firm's structure and its formal planning and coordination systems, as well as from the relations among groups within a firm and between a firm and those in its environment (Barney, 1991). The firm's shared vision is also an organizational resource, embodying cultural contracts that engender commitment and facilitate strategic implementation (Ginsberg, 1994; Collis, 1991). Together, these organizational resources frame the administrative context of strategy development (Bower, 1970).

Intangible Resources

In contrast to tangible resources, intangible resources are less visible and much more difficult to quantify. Resources are considered intangible if they are tacit, diffused throughout the firm, or socially embedded (Reed & DeFillipi, 1990). Competitors are less able to understand or imitate these resources, and thus they may represent the

strongest source of competitive advantage for firms (Itami, 1987; Barney, 1991; Peteraf, 1993). Intangible resources can be grouped into three categories: technology, reputation, and innovation (Barney, 1991; Grant, 1991; Hall, 1992).

Technology resources include a firm's stock of technological processes and knowledge. It has been suggested that technological capabilities such as proprietary designs and the tacit production process knowledge that becomes embedded in the organization's collective knowledge base and structure over time are important sources of advantage (Leonard-Barton, 1992; Teece, Pisano, & Shuen, 1990). Possession of these types of resources may drive differentiation strategies or the development of cost efficiency strategies (Porter, 1985; Simpson, Love, & Walker, 1987), although the mechanism through which technology influences strategy has not been identified.

Reputation resources include perceptions of the firm held by its stakeholders, including consumers, suppliers, and creditors. Reputation is a fragile resource not easily bought. It takes time to create and is easily damaged (Rao, 1994; Hall, 1993). A firm's reputation influences its ability to acquire funds and attract talented employees. The firm earns its current reputation through its previous relationships with customers, suppliers, creditors, and other stakeholders, and the quality of that present reputation lays the foundation for its future reputation (Lado, Boyd, & Wright, 1992).

Innovation resources include those resources associated with a firm's research and development efforts, such as research facilities and the technically-skilled individuals employed within them. Additionally, innovation may also be administrative in nature, involving changes in structure and managerial processes. Administrative

innovation indirectly impacts the firm's work activities and is more directly related to its organizational resources, such as internal management (Ibarra, 1993; Damanpour, 1988). A firm's ability to devise new organizational forms and processes enhances its ability to exploit new opportunities internally, such as technological advancement, and externally, such as new or expanding markets (Sanchez, 1995).

Resource Concerns

The above discussion has focused on the impact of individual resources on firm strategies. However, it is important to note that resources may influence performance independent of strategy. For example, studies indicate that reputation, employee knowledge and skills, organizational alignment, and innovation directly influence performance (Hall, 1992, 1993; Rao, 1994; Powell, 1992; Henderson & Cockburn, 1994). However, these studies only considered the link between specific resources and performance, with no consideration for the role of strategy. Thus, further study is required to better elucidate the contribution of specific resources to firm performance, both directly and indirectly through their impact on strategies.

A second concern highlights the ubiquitous nature of resources. For example, human and organizational resources are grouped with tangible resources even though parts of their definitions clearly suggest intangible qualities. The difficulty of even simple categorization of resources has hindered empirical study of the resource-based view.

Finally, it is important to understand that these resources are often interdependent and lead to development of other resources. For example, innovation

resources may be enhanced from contributions from a firm's capital and human resources. Schendel (1994) suggests that complex resources are built hierarchically out of other resources. Schendel further asserts that this dynamic path-dependent process is why performance and sustainable competitive advantage may depend fundamentally on these complex assets (Schendel, 1994).

Empirical Studies of the Resource-based View

To date, the large portion of research based on the resource-based view of the firm has been conceptual rather than empirical. However, a number of studies have highlighted the relationships between resources, strategy, and performance and are discussed here.

Resources

Several studies have attempted to identify important firm resources. Aaker (1989) surveyed 248 managers from manufacturing and service strategic business units, asking them to list their sustainable competitive advantages. This resulted in a list of thirty-one sustainable competitive advantages. Aaker identified reputation, vision, knowledge, and technology as prominent among the resources creating these advantages.

It has been suggested that the process of developing new sources of advantage is a resource as important to a firm's long run success as the content of its strategies. In support, McGrath, MacMillan, and Venkataraman (1995) conducted an exploratory study of 40 firms utilizing regression to find that the process of competence development was enhanced by resources they labeled comprehension (the linking of

know-how and skill) and deftness (the minimizations of agency, transactions, and opportunity costs to foster interactions) (McGrath et al., 1995).

These two studies are useful starting points for understanding which resources are influential in a firm's development of competitive advantage. However, they do not consider *how* resources are related to a firm's strategy or performance. Further, it should be noted that the resources receiving the most attention in these studies (e.g. reputation and knowledge), are intangible and thereby difficult to quantify. The complexity of these resources causes difficulty for imitators (Miller, 1996) but also inhibits the ability of researchers to demonstrate relations between a firm's resources and its performance which is implicit in resource-based theory.

Resources and Performance

A small number of studies have examined the general relations between resources and performance. Three of these find the intangible resource "reputation" as their key focus. In a survey of 847 firms in the United Kingdom, CEOs indicated that they perceived a link between intangible resources and performance, and they ranked reputation, employee know-how, culture, networks, patents, and trade secrets as critical (Hall, 1992).

Hall (1993) conducted a follow up study using case analyses of six firms (three manufacturers, two retailers, and one transportation firm). He identified reputation, know-how, culture, networks, and data bases as specific intangible resources important for competitive advantage in the sampled firms, and thus reinforced his earlier findings. One cited limitation was that the firms sampled were all successful and that managers

from unsuccessful firms might not have as clear insight into the nature of their enterprises.

In a more sophisticated study of reputation as a resource, Rao (1994) used event history methods in a sample of 381 contests between early automobile manufacturers to show that the intangible resource reputation, as an intangible resource, crucially influences firm survival. Technology, capital, and firm history were also key resources considered by Rao that support firm survival.

The resource "competence" has also been explored. In particular, two broad types of resources, component competence and architectural competence, are argued to contribute to competitive advantage. Component competence is the knowledge and abilities used daily in problem-solving, and can be thought of as a human resource. Architectural competence is the ability to integrate and develop component competencies, characteristic of organizational resources. Henderson & Cockburn (1994) analyzed 3210 longitudinal observations from a sample of ten major pharmaceutical firms. Using poisson regression, they found support for the importance of both types of competence as a source of advantage when performance was conceptualized as research productivity. Further, in support of the resource-based view, this study found that unique firm effects account for a substantial variation in productivity across firms (pseudo $R^2 = .69$). The authors cite two important challenges for future study, the methodological problems associated with measuring intangible resources, such as competence, and the importance of exploring sources of competence.

Hall (1993, 1992) has argued that networks are a key intangible resource impacting firm success. In a study of mutual funds managed by agents and custodians (Levinthal & Myatt, 1994) using logit and multinomial logit, relational factors such as duration and intensity of ongoing client relationships were shown to sustain existing competitive positions. This suggests that firm performance is an outcome of the linkages the firm maintains with particular clients and the overall market (Levinthal & Myatt, 1994). A limitation of the study offered by the authors, however, is that the data set relied heavily on market measures and only crudely reflected harder-to-quantify internal organizational attributes, such as relationship-specific expertise.

A final study examining the relationship between resources and performance explored the impact of organizational alignment, as a strategic resource, on profitability (Powell, 1992). Organizational alignment, defined in the study as a firm's underlying structure and orientation, reflects the firm's capability to integrate tacit, complex, and hard to imitate skills. Using partial correlations in a sample of 113 firms in two manufacturing industries, Powell (1992) found that some organizational alignments generated supranormal profits, independent of strategy type and industry. These include alignment between a firm's organizational differentiation and integration, size and structural formalization, and size and formal planning comprehensiveness. A key limitation of the study is its use of two manufacturing industries, since it has not been shown that alignment is important in other types of industries, including service or retail sectors (Powell, 1992).

In summary, a variety of studies have sought to identify particular resources associated with firm performance. The primary focus of these studies have been on intangible resources, notably reputation, know-how, relationships, and culture. Collectively, these studies support the importance of these resources to firm performance. A common difficulty resides in the use of relatively unsophisticated analytical techniques employed (notable exceptions are Henderson & Cockburn, 1994; Levinthal & Myatt, 1994) and questionable variable operationalizations. Finding suitable indicators for intangible resources was problematic for the studies mentioned here.

A related issue pertains to *how* intangibles influence performance. Miller (1996) argues that competitive advantage lies not in the possession of specific resources, but rather from the integration of resources into unique and complex bundles. The ambiguity associated with these resource bundles creates advantage because competitors cannot understand or duplicate them. Unfortunately, this causal ambiguity has prevented researchers from understanding how intangible resources affect performance as well.

Finally, these studies have largely sampled firms in manufacturing industries. Very little is known about the resources associated with service providers. This is an important limitation because there is no evidence to suggest that resource development and utilization are the same for firms in manufacturing and service industries.

Resources and Strategy

A third relation explored within the resource-based view of the firm is the association between resources and strategy. Bergh (1995) studied 112 Fortune 500 firms and examined the resources "SBU relatedness" and "internal efficiencies" in conjunction with the sell-off strategy preferences of owners and managers. The study, using hierarchical multiple regression and logistic regression, found that owners favor cooperative and strategic synergy and managers prefer competitive and financial synergies in sell-off strategies. This study is of particular interest because it raises questions about the generalizability of its findings to small family firms, where the goals of professional managers are often thought to differ from those of the family.

Collis (1991) studied three categories of broadly defined resources, core competence, organizational capabilities, and administrative history in the context of global strategy development. Case analyses were conducted for three international firms in the bearings industry. Collis found that a firm's core competence will impact its choice of markets, that firms may re-adapt their resources and tasks without altering their basic strategies, and that a firm's accumulated tangible and intangible resources constrain its strategic choices. His results suggest that both economic analysis and the resource-based view are necessary to garner a complete understanding of global strategy.

In summary, studies examining the resource - strategy relationship have shown strong evidence that firm resources are a key factor in determining and supporting its strategic choices. However, they have focused on large manufacturing firms. Hence,

generalizability to small firms or service sector firms is questionable. Resources that are important for small and/or service firms are likely to differ greatly from those of large manufacturers, especially because these types of firms often adopt strategies that differ from those of large manufacturers (Bergh, 1995).

Resources, Strategy, and Performance

The bulk of empirical studies using the resource-based view of the firm have been concentrated within the diversification literature. These studies have tended to focus on large manufacturing firms and quantifiable tangible resources. The studies presented below have specifically incorporated the resource-based view of the firm into their research design.

Robins & Wiersema (1995) studied eighty-eight Fortune 500 manufacturing firms using regression to determine the influence of market share, firm size, and firm relatedness on the performance of diversified companies. They found that a resource-based approach to modelling SBU inter-relationships explained a significant portion of financial performance for large manufacturers.

Harrison, Hitt, Hoskisson, and Ireland (1991) examined the performance effects of intensity of resource allocation in capital, interest, research and development, and administration in a study of 1100 mergers. They used multiple regression to find that differences in resource allocations of acquiring firms and target firms combine to create value for the merged firm.

Chatterjee and Wernerfelt (1991), in their 118 firm study of resources and diversification choices, examined the impact of three classes of resources: physical,

financial, and intangible. Regression results indicated that intangible (such as marketing and innovation skills) and financial resources (such as internal funds and equity capital) were most important in explaining diversification decisions. These results led them to conclude that the diversification - performance link can only be understood in light of firm resources.

Finally, Hitt and Ireland (1986) focused on the relationship between shared technology and skills between SBUs and performance in their study of 185 large manufacturers. Using regression, they found that corporate level distinctive competencies (including centralized functions such as marketing, manufacturing, and corporate research and development) related to performance (defined as shareholder value) varied by diversification strategy rather than divisional structure.

Additionally, two non-diversification studies have been conducted that focus on the resource, strategy, and performance relations. A study of 74 CEOs of medium firms with international operations used regression to find that CEO characteristics are a resource that impacts firm performance through their strategic choices (Roth, 1995). Specifically, the interactions between a CEO's locus of control, information evaluation style, and international experience significantly influenced performance (measured as income growth). Further, it was found that as a firm's level of international interdependence increases, the CEO's role as an integrator and manager of the decision-making process becomes an even more valuable firm resource (Roth, 1995).

Carr (1993) studied the resource, strategy, performance links using a single case study and industry comparisons in the vehicle components industry. The focal

resources were technology, production efficiency, and relationships. Analyses indicated that strategies developed through consideration of the firm's resources result in better performance than strategies that do not consider firm resources.

In sum, research exploring the relationships between resources, strategy, and performance have provided insight into the nature of resources that constrain the strategies adopted by firms and the ultimate impact of those resources on performance. The studies show the impact of specific intangible resources, such as technology and research and development, and more prominently, tangible resources, such as financial strength on diversification and other strategic decisions. The diversification studies also underscore the need to consider resources at both the corporate and business levels.

These studies have been limited, however, by the narrow range of strategic contexts explored. They provide no information about how resources affect other types of strategies. Further, these studies have incompletely examined the relations between resources, strategy, and performance. Because they only sampled diversified firms, they have controlled for the effects of strategy. Moreover, rather than examining diversification within a resource-based framework, many of these studies examine resources within a diversification context. However, diversification is but one type of strategy, and thus we have limited knowledge about the relationships between resources, strategy, and performance. Importantly, small firms may not have the tangible and intangible resources to carry out diversification strategies. Survival strategies may be more important.

It is interesting to note that regression is the primary analytical technique utilized in these studies. This may be driven by the quantifiable nature of the resources under consideration - that is, the focus has been on tangible resources. However, as scholars have noted (e.g. Chatterjee & Wernerfelt, 1991), intangible resources are vitally important as well. This suggests that knowledge gained from the largest body of studies using the resource-based view provides an incomplete picture of the associations between resources, strategy, and performance.

Another limitation of these studies is that they have explored resources in the context of large diversified manufacturers. These firms are typically managed by non-owners, or managers who may own stock but not controlling interest in the firm. In contrast, in the family firm ownership and control are not separated. Studies have shown that the strategic choices made by owners are often different from those made by managers (c.f. Bergh, 1995; Green, 1992). Thus it seems reasonable to expect that the relation between resources, strategy, and performance might be very different in the family firm.

Summary of Empirical Studies

Examination of the current resource-based research shows that work in this area is incomplete. In general, study samples have been limited to large manufacturing firms. This is troubling because large firms and small firms can differ widely in their resource configurations and hence, the strategies they adopt. For example, large firms typically have greater access to capital and human resources, as well as slack resources (Aldrich & Auster, 1986) and are thus able to carry out diversification strategies. Many

family firms, however, are small businesses, possessing fewer resources, and may develop less ambitious growth strategies (Bruderl & Schussler, 1990). Similarly, resource combinations are very different for service and manufacturing firms (Grant, 1991). For example, rather than investments by manufacturers in plant and technology, service firms are more focused on human and financial resources. This identifies a substantial gap in that generalizability of the current research to other populations is severely limited.

Another limitation in the literature stems from the inadequate attention to the relation between resources and strategy, and ultimately performance. Despite evidence that resources influence the strategies selected by firms (c.f. Bergh, 1995; Collis, 1991), the bulk of studies considering the resource-strategy-performance links have assumed only one strategy, diversification. In fact, by only sampling diversified firms, these studies have controlled for strategy effects they might have otherwise discovered. Further, these studies have ignored strategic choice. Clearly, the diversification studies address how resources affect performance in diversified firms, but unfortunately, they do not consider how resources impact the choice of firm strategy.

A third limitation of the extant literature is attributable to the types of methods employed. Studies have relied heavily on surveys, case analyses, and regression. However, surveys often do not penetrate deeply below the surface of the phenomena under study (Kerlinger, 1986). Case analyses, while offering a richness not available from quantitative methods, is of limited usefulness for drawing causal inference and generalizable conclusions (Stone, 1978). Further, regression techniques do not fully

capture the interdependencies inherent in the resource-based view nor can they incorporate latent variables (such as intangible resources) into the analysis (Hair, Anderson, Tatham, and Black, 1995). Only recently have more sophisticated multivariate techniques been applied.

Extant research has also been hampered by the difficulties inherent in measuring intangible resources. Scholars recognize that intangibles, such as technology, innovation, and strategic vision, may be critical components of competitive advantage. However, the very nature of intangible resources renders their empirical study difficult. Thus, while the proposition that intangible resources play a key role in performance is a commonly accepted tenet of the resource-based view, there is little empirical evidence to support it (Godfrey & Hill, 1995; Rao, 1994; Robins & Wiersma, 1995; Henderson & Cockburn, 1994; Levinthal & Myatt, 1994). Moreover, the causal ambiguity associated with these resources makes the impact of intangible resources on performance difficult to ascertain.

Summary of the Resource-based View

The limitations noted above suggest several areas of study within the resource-based view that are ripe for further development. These include the identification of specific resources important to strategy development and performance and the nature and degree of that importance. It can be seen from the studies reviewed here that only a limited number of resources have been closely examined in the literature. This may stem from differences in how scholars have defined resources. In fact, resources are

defined so broadly that almost anything the firm possesses or can control may be deemed a resource. Norms guiding what researchers label resources are nonexistent.

Considerable uncertainty remains regarding *which* specific firm resources contribute to firm performance and competitive advantage (Peteraf, 1993). Researchers have suggested that sources of sustainable competitive advantage might be found at different times and places in different industries (Collis, 1994), making concrete operationalization of the resource-based view problematic (Collis, 1994; Bromily, 1993). Conceptual determination of the attributes of resources that lead to sustainable competitive advantage (Barney, 1991; Amit & Schoemaker, 1993) represents a start in the right direction. However, which resources are bundled together and which resource combinations are most important to strategy determination and performance has yet to be explored. A related gap is that little is known about processes through which resources become bundled to enhance firm performance. That is, while individual resources are important, it may be their combination that results in sustainable competitive advantage. Greater specificity is needed about actual resources and the processes through which they are developed before the resource-based view can reach its full potential, both conceptually and practically (Black & Boal, 1994; Levinthal & Myatt, 1994).

It has been suggested that the ultimate strength of the resource-based view lies not in verification of key constructs but in the correspondence of its predictions to reality for a population of firms (Godfrey & Hill, 1995). Thus, more work in examining the relative contributions of resource-based factors to performance variance across firms is called for.

Perhaps the greatest impediment to identifying specific resources and their role in firm performance has come from the challenges associated with measuring intangible resources. Intangible resources are by nature latent constructs, and thus difficult to elucidate. Tangible resources are by definition quantifiable but only measuring tangible resources paints an incomplete picture of the compound assets underlying firm strategy and performance. Utilizing viable proxies for firm-specific resources (c.f. Hansen & Wernerfelt, 1989; Rumelt, 1991) represents a valuable means of furthering this work (Godfrey & Hill, 1995). The importance of behavioral and social phenomena in the resource-based view suggests that proxies for many intangible resources may be found outside the strategic management literature, thus offering the opportunity for integration with other areas in management and the social sciences.

Conclusion

This chapter began with a brief review of the family business literature. It was shown that the study of family business has been hampered by the lack of clear definition and a unified paradigm. Empirical studies of the family firm have primarily addressed structural issues, such as family firm succession, and family firm development. In addition to the lack of unifying concepts, the narrow range of topics has limited understanding of the family firm.

Next, literature regarding the resource-based view of the firm was reviewed. The resource-based view focuses on understanding a firm's competitive advantage through the relationship between a firm's internal characteristics and performance (Barney, 1991). Despite the resource-based view's implicit and explicit role in the

development of the field of strategic management, its importance has only recently emerged. The studies examined here highlighted the relationships between resources, strategy, and performance, with the bulk of studies exploring the resource-based view in a diversification context. Progress in this literature has been slowed by the lack of a clear conceptualization and measurement of tangible and intangible resources. A large gap in the resource-based literature is that little has been done to identify specific resources critical to strategy development and performance. Further, our knowledge of how resources are combined to enhance firm performance and competitive advantage is also limited. Also, because studies have primarily focused on large manufacturing firms, even less is known about resources, strategy, performance, and the relations between them in the context of small businesses or service segments.

The resource-based view of the firm will be limited in its ability to inform scholars and managers until the gaps discussed earlier are filled. The study proposed herein will contribute to that cause by explicitly looking at specific resources and how they relate to strategy choice and firm performance. In the next chapter, a model is developed that utilizes the resource-based view and network theory to predict that: 1) firm resources influence strategy development; and 2) strategy influences firm performance.

CHAPTER 3

MODEL DEVELOPMENT AND HYPOTHESES

The importance of the family firm to the American economy cannot be overstated. Hence, understanding forces that drive performance of these businesses is crucial. It is argued here that the resource-based view of the firm has great potential to inform our study of these firms. The thesis of this dissertation is that the bundling of a firm's tangible and intangible resources is a critical component of family firm strategy and performance. Thus, as noted in Chapter 1, the research questions examined herein are:

How do resources impact strategy and performance in the family firm?

What resources are important to strategy and performance in the family firm?

Propositions regarding the impact of resources on a firm's choice of strategy are offered in this chapter. A comprehensive model is proposed, identifying the relations between tangible and intangible resources, firm strategy, and firm performance. Finally, hypotheses are proposed to test theoretically derived linkages between constructs in the model.

An Integrated Model of Family Firm Performance

The resource-based view of the firm has not fully realized its explanatory potential because of difficulties associated with modeling the complexity inherent within this perspective. This dissertation seeks to overcome that shortcoming by drawing from a variety of theoretical perspectives to better understand the importance of tangible and intangible resources in determining family firm performance.

The theoretical model offered in Chapter 1 is now expanded into a structural model, shown in Figure 2, that identifies specific relations between the effects of tangible and intangible resources on a firm's strategic choices and performance. The rationale for the major components of this model are discussed next.

Resources and Strategy

Competitive advantage comes from the coordination of tangible and intangible resources into bundles of complex, complementary resources (Chatterjee & Wernerfelt, 1991; Miller, 1996; Black & Boal, 1994). The complexity and the ambiguity of these resource relationships enable some firms to develop unique capacities that are inimitable (Harrison, Hall, & Nargundkar, 1993; Lippman & Rumelt, 1982). Indeed, it has been suggested that configurations of resource relationships offer a "far greater source of competitive advantage than any single aspect of strategy" (Miller, 1996: 510).

Intangible resources are important for distinctive competence because their complexity makes them ambiguous and inimitable. However, it is their combination with tangible resources that creates sustainable competitive advantage (Grant, 1986; Barney, 1991). For example, innovation is often thought to drive firm performance. Without an organizational structure and top management commitment that fosters innovation, such creativity might never occur in a firm, or having occurred, might never be adopted (Conner & Prahalad, forthcoming). Top managers setting firm strategy focus not on innovative ideas, but rather on the talented personnel and facilities in place to develop those ideas.

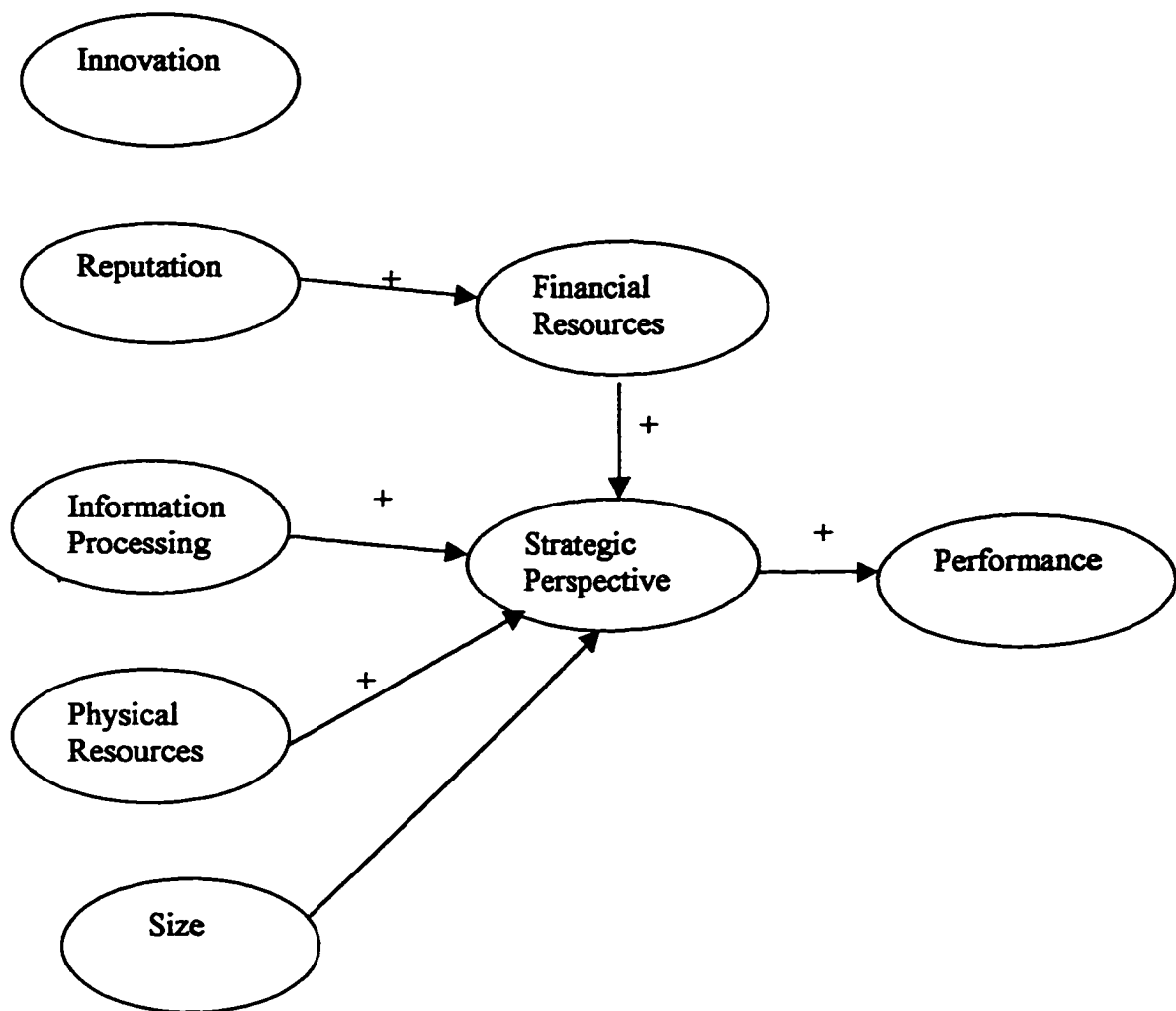


Figure 2
Proposed Structural Model

Competitors cannot separate the effects of tangible and intangible resources to recreate the idiosyncratic resource bundles for themselves (Black & Boal, 1994; Prahalad & Bettis, 1986). Hence, the impact of intangible resources on a firm's strategy, and ultimately on performance, is indirect. That is, intangible resources influence strategy and performance through interdependencies with tangible resources (Teece, 1987). Accordingly:

Proposition 1A: Tangible resources mediate the relationship between intangible resources and strategy.

Proposition 1B: Tangible resources impact a firm's performance through their effect on strategy.

Reputation and Financial Resources

The resource-based view of the firm argues that reputational resources are significant contributors to performance differences between firms because they are rare, socially complex, and hard to trade or imitate. Reputation represents the knowledge and emotions held by individuals about a firm and its goods and services (Hall, 1992). Institutional scholars label this resource "legitimacy" (Rao, 1994), an intangible resource that raises the status of the firm in the community and aids in resource acquisition, and thus influences the survival of the firm (Baum & Oliver, 1991; Dowling & Pfeffer, 1975; Pfeffer & Salancik, 1978; Hannan & Freeman, 1989). As conceptualized in Proposition 1A, the ability for reputational resources to aid in the acquisition of other resources exemplifies the strong impact that intangible resources have on the development of tangible resources.

Financial resources are the dollars, and access to dollars, that enable a firm to carry out its daily activities and position itself for the future. Much of what is known about the accumulation of financial resources comes from the entrepreneurship literature on new ventures, which asserts that previous working relationships, voluntary connections, and kinship and community ties provide the initial reputational resources for independent new ventures (MacMillan, 1983; Birley, 1985). Study has demonstrated that entrepreneurs are able to convert time and energy previously invested in social and business relationships into future benefits for their emerging firms (Larsen & Starr, 1993). Further, established reputations can be considered signals that influence the actions of firm stakeholders. Favorable reputations enable firms to charge premium prices, enhance their access to capital markets, and attract investors (Fombrun & Shanley, 1990).

In summary, it is posited here that reputational resources are an important determinant of a firm's ability to generate needed financial resources. More formally:

H1: Reputational resources have a direct positive influence on a firm's financial resources.

Strategy

Mintzberg (1987) has suggested that strategy encompasses a firm's perspective. Hence, strategy as a perspective informs top management's choice of goals, business lines, and competitive approach. As such, strategy is more than a chosen position, it also represents an ingrained way of perceiving the world (Mintzberg, 1987). For example, Wal-Mart has prospered through Sam Walton's vision of low prices. Strategic

perspective is shared, firm members are joined through common beliefs and values (Mintzberg, 1987; Weick, 1985) which act as lenses through which managers perceive their world (Donaldson & Lorsch, 1983).

A firm's strategic perspective can be broad or narrow. Firms with a broader perspective have a more holistic understanding of the complexity inside and outside the firm. This broader strategic orientation enables firms to perceive a wider array of strategic options. Firms with a narrower strategic orientation perceive a more limited menu of choices (Zahra & Covin, 1993; Matthews & Scott, 1995).

Through perspective, then, the firm develops its strategic choices. A myriad of strategies can be developed, based on the firm's vision of itself and its competitive environment. These strategies can range between entrepreneurial and efficiency strategies (Hambrick & Schecter, 1983; Pearce & Robbins, 1993). Entrepreneurial strategies involve changes in a firm's products and target markets with a focus on products and market-based actions (Hambrick & Schecter, 1983; Pearce & Robbins, 1993). Strategies such as differentiation (Porter, 1980) and domain offense (Miles, 1982) can be considered entrepreneurial. Efficiency strategies focus on decreasing costs, and improving the operations of production and management systems (Hambrick & Schecter, 1983). Cost leadership (Porter, 1980) and domain defense (Miles, 1982) are representative efficiency strategies.

Human Resources and Strategic Perspective

Perhaps the most critical resource in the family firm is its top management team (Lado & Wilson, 1994). They are directly responsible not just for the content of firm

strategy, but also for the process through which strategy is developed. The importance of coherence between strategy content and the process has recently been demonstrated (Pettigrew & Whipp, 1991, 1993; Ketchen, Thomas, & McDaniel, 1996). The top management team's ability to process information about strategic issues affects their recognition of salient strategic issues and limits their search for data (Staw, Sandelands, & Dutton, 1981; Dutton & Jackson, 1987). Environments are dynamic, thus family firm survival is dependent on how top managers process information used to construct firm strategy (Daft & Lengel, 1986). Top management's capacity to process information is thus a key resource for the firm.

Top management teams with a high capacity for processing information will find and process information they see as positive and as leading to potential gains, even in times of crisis (Smart & Vertinsky, 1984). Thus, increased capacity for information processing creates a broader strategic orientation among top managers in the firm. The holistic understanding created through a greater capacity for information processing enables the development of more inciteful strategies, either entrepreneurial strategies, which require large amounts of information, or efficiency strategies, to capitalize on perceived opportunities (Thomas & McDaniel, 1990).

Narrow strategic perspective is the result of limited information processing by the top management team. These teams guard against threats rather than scan the environment for opportunities (Frederickson, 1986; Bourgeois, McAllister, & Mitchell, 1978). Often such teams focus on issues as they occur, and are thus restricted in the amount of information they have to base decisions upon, much as in reactor firms

(Miles & Snow, 1978). Constricted information usage results in strategic choices requiring less information (Dutton & Jackson, 1987).

In sum, a top management team's capacity to process information is a key determinant of its strategic perspective. More formally:

H2: There is a direct, positive influence between a firm's information processing capacity and the breadth of its strategic perspective.

Financial Resources and Strategic Perspective

Financial resources include the firm's ability to raise capital, both through debt and equity, retained earnings, cash, and investments in financial instruments. Such resources have a key role in a firm's strategic perspective. Access to capital allows the firm to compete more aggressively in its environment and also provides a cushion of resources for the firm that buffers it from environmental downturns (Bourgeois, 1981; Thompson, 1967). The behavioral theory of the firm, posits that a firm's finances allows it to overcome the scarcity of other resources and provides funds for innovation (Cyert & March, 1963).

It is argued here that firms with more financial resources have a broader strategic perspective than firms lacking those resources. Possession of financial resources affords more discretionary opportunities to the firm (Hambrick & Finklestein, 1987), and promotes entrepreneurial decision making (Mintzberg, 1973) which enhances a firm's strategic perspective. Opportunities include the ability to innovate, upgrade facilities, and develop new markets consistent with entrepreneurial strategy (Lubatkin & O'Neill, 1987), or to invest in state-of-the-art technology to increase efficiency (Bourgeois, 1981; Hambrick & Snow, 1977; Thompson, 1967). Thus:

H3: There is a direct positive relationship between a firm's financial resources and the breadth of its strategic perspective.

Physical Resources and Strategic Perspective

Physical resources include assets such as a firm's plant and equipment, geographic location, and access to raw materials. These resources contribute to a firm's competitive advantage to the degree that they are valuable, rare, inimitable, and non-substitutable (Barney, 1991). For example, a key physical resource meeting these criteria is location (Black & Boal, 1994; Miller & Shamsie, 1996). Possession of a location perceived as "prime" represent a real advantage for the firm. Possession of several prime locations offers even greater advantage.

A firm's strategic perspective is impacted by its control of valuable physical resources because they buffer a firm from its competition (Wernerfelt & Karnani, 1987). Further, control of these assets encourages their further enhancement (Miller & Shamsie, 1996), thus the development of a broader strategic perspective. For example, firms believing they have a valuable location will act entrepreneurial and undertake further development of that asset, through expansion or modernization of facilities. Beyond location, possession of upgraded plant and equipment increases a firm's latitude. Traditional differentiator firms (Porter, 1980) may recognize that their physical resources offer the potential for achievement of cost efficiencies as well. Thus, physical resources broaden a firm's strategic perspective. Firms who do not perceive the value of their physical resources will adopt a narrower view of developing those resources more fully. More formally:

H4: There is a direct positive relationship between a firm's physical resources and the breadth of its strategic perspective.

Strategic Perspective and Performance

Strategic choice proponents argue that managers directly influence firm performance through their selection of strategies for the firm (Child, 1972). This view suggests that firms not only adapt to their environments, but can also influence them through firm action (Weick, 1979). It has been posited that the essence of a firm's strategic decisions is how to use its current resources and how to develop additional unique resources (Wernerfelt, 1984; Mosakowski, 1993).

A firm's strategic perspective is driven by the unique combinations of tangible and intangible resources it possesses that create distinctive competencies for the firm. Organizations with a broader strategic orientation are better able to correctly identify the resources contributing to their core competencies. Thus they are able to formulate and implement strategy with greater success (Barney, 1991; Amit & Schoemaker, 1993) because they have a deeper understanding of the complexity inside and outside the firm. This broader strategic orientation also engenders commitment to their selected strategy.

Moreover, strategists are becoming disenchanted with beliefs in a "one best strategy." At the business level, a firm can be successful following a cost-based strategy. Likewise, they may enjoy success as a differentiator. Hence, the key is not necessarily which strategy they pursue, but how they implement such strategies. Firms with a broader strategic perspective are able to more effectively integrate and utilize their resource bundles to take advantage of environmental opportunities. Their

commitment to a strategy, demonstrated through the firm's resource deployments, enhances their performance. Thus, equifinality suggests that both entrepreneurial and efficiency strategies can be successful for family firms that commit themselves to a strategy based on their strategic perspective.

In sum, family firms that commit themselves to a single strategic direction based on their strategic orientation will outperform those with a limited strategic perspective.

More formally:

H5: There is a direct positive relation between strategic perspective and family firm performance.

CHAPTER 4

RESEARCH DESIGN

The research design used in this study is described in this chapter. The sample and data collection procedures are discussed first, followed by description of the manifest variables selected to measure latent constructs in the proposed structural equation model. The chapter concludes with a description of the statistical techniques used for hypothesis testing.

Sample and Data

The sample studied in this dissertation is composed of family firms in the retail sector, more specifically family owned jewelry stores. The study of a single industry is appropriate in early stages of theory testing because it prevents the impact of industry effects on results, thus allowing clearer interpretation. Jewelry retailing, in particular, offers an attractive population of firms because of a rich tradition of family ownership in that industry.

With over 50,000 jewelry stores in the United States, it was unfeasible to sample all jewelry stores due to costs and other practical concerns. Thus, a sample was randomly drawn from a list of jewelry stores in urban areas of the sunbelt region of the United States. This list was secured from a research center specializing in the distribution of selected sampling lists. Firms included in the sample had to meet several requirements. First, their only line of business was jewelry. Second, they were not pawn shops. Finally, they were not major jewelry store chains (e.g., Zales).

Data Collection

Data collection was carried out through development of a questionnaire. Survey items included existing validated scales and questions about specific business information (e.g. number of locations). Following Dillman (1978), the questionnaire was pilot tested with academics, industry experts, and practitioners. The number of firms sampled was 1250. After the initial mailing (including a cover letter, questionnaire, and stamped return envelope), a reminder postcard was sent after one week. Two weeks later, phone calls were placed to those owners who had not yet responded. Of the 1250 firms sampled, 73 were returned undeliverable. A total of 83 usable responses were received from primary respondents (7% response rate).

To explore the possibility of nonresponse bias, the “last respondent” method of examining nonresponse bias was used (Armstrong & Overton, 1977). This method suggests that the subjects who are slower to respond are more like nonrespondents than those who respond quickly. The sample of respondents was divided, so that those who responded after phone calls were grouped as nonrespondents and those who returned their surveys promptly were grouped as respondents. The two groups were then compared on seven characteristics (family business, number of full time employees, debt/equity ratio, earnings, sales growth, number of stores, and square footage), using an F-test for significant differences. There were no significant differences between early and late respondents, suggesting no significant differences between respondents and nonrespondents.

Sample Size

Sample size is a critical component in the trustworthiness of solutions and parameter estimates generated in structural equation modeling. A sample size/parameters ratio of five or more is generally sufficient to achieve reliable estimates (Bentler, 1995; Hair et al., 1995). This study employed 8 structural constructs and 12 measured variables, and thus a sample of 100 was needed. However, because the validity of structural components were assessed separately from that of measured variables through a two step process (Anderson & Gerbing, 1988) described later in this chapter, the minimum sample size required was 60. The final sample size used in the analysis was 83. Summary statistics for the firms included in the study are given in Table 1.

Table 1
Summary Statistics for Firms in the Sample

	Mean	s.d.	Range
Family members active in firm	2.71	1.57	7
Family members in top management	1.93	.84	5
Number of full time employees	6.95	12.39	105
Sales	4.04	1.49	5
Number of locations	2.19	5.08	39
Square footage	1324.69	812.83	4498

Measurement of Theoretical Constructs

The hypothesized relationships in Chapter 3 are between latent constructs.

Because constructs are abstractions about unobservable phenomena, manifest measures, or indicators, are used to identify the constructs. Following is a discussion of the measures used in this study.

Resources

Information Processing

Top management team information processing is the human resource of interest in this study. A nine item scale assessing the information processing capacity of top management teams in retail settings was adapted from an information processing capacity scale used by Thomas and McDaniel (1990) based on Duncan (1973, 1974). A seven-point Likert scale format was used (Anchors 1 = never, 7 = always). The scale was coded such that high scores indicated a high capacity for information processing whereas low scores indicated a lower capacity for information processing. The scale reached a Cronbach's alpha of .73.

Location

Location is the most important physical resource providing competitive advantage in the retail sector (Aaker, 1989; Miller & Shamsie, 1996). Location affects not only the size and composition of the market for a firm's products and services, but also the firm's competitive position within its industry (Mason & Meyer, 1981). Respondents provided the number of locations and square footage operated by their firm. To assess the "value of location" as a resource for the firm, respondents were

asked to identify the desirability of their location on a five-point Likert scale (Anchors 1 = undesirable, 5 = extremely desirable).

Financial Resources

Two elements of financial resources critical to family firm success were measured, debt and liquidity. Because family firms are reticent about providing sensitive financial data, managerial perceptions of debt and liquidity were measured. Study has offered support for the relevance of reference levels in specifying financial resource indicators (Miller & Leiblein, 1996). It has been argued that changes in finances over time, rather than absolute measures of financial position, are more relevant in explaining firm behavior (Bourgeois, 1981; March & Shapiro, 1987).

Debt was measured through the perceptions of changes in the firm's debt/equity ratio. Decreasing levels of debt relative to equity suggests that the firm can secure additional funds if needed. Increasing levels of debt relative to equity suggest a reduced availability of additional funds through debt for the firm. Managers were surveyed as to the degree to which the firm's debt ratio has increased or decreased over the last three years.

Liquidity was measured through perceptions of changes in the current ratio, a firm's current assets divided by its current liabilities. This measures the resources that the firm has available to meet unexpected contingencies. An increasing current ratio signifies a greater amount of financial resources immediately available to the firm. Managers were asked to indicate the degree of increase or decrease in the current ratio over the last three years.

Computerization

Innovation represents something new for the firm or its markets (Hoffman & Hegarty, 1993). Within firms, innovation can stem from new or improved products, technological processes (Cooper & Schendel, 1976; Meyer & Goes, 1988) or administrative structures (Kimberly & Evanisko, 1981). Retail jewelry stores compete in a relatively stable climate, and with the exception of major chains, are fairly small. Thus, little variation was expected in new or improved products and administrative structure. Technology, however, has had an impact on small retailers through the availability of low-priced, easily accessible computing capability. A firm's level of computerization facilitates customer services, including checkout, billing, and inventory availability. Respondents were thus asked to estimate the level of computerization for their firms on a five-point Likert scale (Anchor 1 = no computerization, 5 = high computerization).

Reputation Resources

Reputation is critical to a firm but difficult to measure. Because it was cost prohibitive to survey each firm's customer base, this study used proxy measures to ascertain the strength of a firm's reputational resources (Godfrey & Hill, 1995). Previous research has shown that firms value the visibility and reputation-building associated with contributions to charitable organizations (Thomas, Smith, & Hood, 1993; Fombrun & Shanley, 1990). Conversations with jewelry store executives support the important association between charitable giving and firm reputation. In part, this is how publics judge how well firms respond to non-economic agendas.

Charitable contributions was used here to assess reputational resources. Respondents were asked to provide the dollar values of the two types of contributions commonly used by retail organizations, monetary donations and merchandise contributions. Further, respondents were asked to give their perceptions of their firms' reputation on a five-point Likert scale (Anchor 1 = very low, 5 = excellent). Finally, because reputation is sometimes evaluated through perceptions of price (Fombrun & Shanley, 1990), respondents were asked the average price of a diamond solitaire engagement ring.

Strategic Perspective

It has been posited that three components underlie strategic perspective: innovation, proactiveness, and risk-taking (Miller, 1983; Covin & Slevin, 1988). Firms with a broader strategic perspective have a greater willingness to innovate, to take business-related risks, and to be proactive in their competition with other firms (Naman & Slevin, 1993). For example, Miller (1983) argues that a firm would not be entrepreneurial if it merely innovated through imitation, refusing to take risks and be proactive. Further, highly leveraged risk-taking firms would not necessarily be entrepreneurial without engaging in innovative activities.

A nine item seven-point Likert type scale, developed by Covin and Slevin (1989) was used to tap the three strategic perspective dimensions. Three items were used for each dimension, with differing anchors for each item. In this study, the resultant Cronbach alphas associated with innovation, proactiveness, and risk were .79, .66, and .89 respectively.

Performance

Because most of the firms in this sample were privately held, detailed objective accounting data of performance was not available. Therefore, executives were asked to evaluate their firm's performance along two dimensions: business volume and growth. Past research has demonstrated these to be particularly valuable indicators of firm performance (Chandler & Hanks, 1993). Business volume was measured by levels of earnings. Business growth was measured with a scale that included levels of growth in market share, change in cash flow, and sales growth. Subjective self-report measures such as these have been shown to be highly correlated with objective measures of firm performance (Dess & Robinson, 1984; Robinson & Pearce, 1988; Venkatraman & Ramanujam, 1987). In this sample, the Cronbach alpha was .70 for business growth.

Control Variable - Size

The literature has used a variety of definitions for size, most typically the natural logarithm of sales volume and number of employees (Singh, 1986). Because it was possible that firms with a small number of employees differed from those with larger numbers of employees on the dependent variables (strategic perspective and performance), the study controlled for the confounding effects of size, it was measured by the natural logarithm of full time employees (Powell, 1992). It has been argued that controlling for employees is preferable because it is more stable than sales (Hill & Snell, 1989). As well, employee count is less prone to distortions associated with cyclical fluctuations and accounting manipulations (Baysinger, Kosnik, & Turk, 1991).

Covariance Structure Analysis

Structural equation modeling (LISREL8) was used to test hypothesized relationships. SEM is particularly useful for this study because it allows the researcher to simultaneously examine multiple relationships with statistical efficiency. The use of this single multivariate technique provides assessment of the research questions under study. Additionally, while other multivariate techniques are intended to show cause between tangible objects assumed to be free of measurement error, the measured relationships between the hypothetical constructs presented herein are not assumed to be error free (Hair et al., 1995), making SEM the technique of choice.

Two models are produced in SEM, a measurement model that specifies the relations of the observed measures to their underlying latent constructs and a structural model that specifies theory-driven causal relations of constructs to one another. Following Anderson & Gerbing (1988), the two models were analyzed separately. This two step process allowed construct validity to be established before causal relationships were tested, thus allowing meaningful inferences to be drawn. Following a brief review of assumptions, each step will be described.

Assumptions

Maximum likelihood estimation is the method used to estimate the structural equations model. Because an underlying multivariate normal distribution of observed variables is assumed, maximum likelihood estimation has the asymptotic properties of being unbiased, consistent, and efficient and significance testing of an overall model fit is possible (Anderson & Gerbing, 1988). Although recent developments in estimation procedures have led to relaxed assumptions of multivariate normality (c.f. Bentler,

1983), excessive skewness and kurtosis can still reduce the effectiveness of statistical analysis. Data transformations were used to overcome non-normality problems.

Although multiple indicators are advocated in structural equation modeling, methods allow for the use of single indicators. With multiple indicators, measurement error can be estimated by LISREL. Because this is not the case with single indicators, the key issue is to incorporate measurement error rather than assume perfect measurement. Where a single indicator is used to measure a construct herein, as with information processing capacity of top management teams and size, the following procedure was applied. Using the steps outlined by SEM experts, a reasonable estimate of reliability, .85, was set for single indicators. Consequently the error variance was fixed to 1 minus the reliability multiplied by the item variance (Jorskog & Sorbom, 1996; Williams & Hazer, 1986; Anderson & Gerbing, 1988). This procedure is common in structural equation modeling (c.f. Williams & Hazer, 1986; Wayne & Ferris, 1990) and resulting parameter estimates are accurate and unbiased (Netemeyer, Johnston, & Burton, 1990).

The possibility of offending estimates, in which standardized loadings greater than 1.0 and corresponding negative error variances occur, exists in the model. Such estimates are theoretically inappropriate and must be corrected before the model can be interpreted and goodness of fit assessed. In such cases, the standard practice is to set the error variance of the item to a small positive value (Hair et al., 1995; Anderson & Gerbing, 1998).

Measurement Model

Relationships between the latent variables and their manifest indicators (stage 1) were considered before examining the structural relationships between the constructs (stage 2). The measurement model, shown in Figure 3, was assessed through testing its construct validity, first through examination of convergent validity and then discriminant validity.

Convergent Validity

Convergent validity is defined as the agreement between multiple measures of constructs (Schwab, 1980). It is inferred from statistically significant correlations among different measures of the same traits. Weak correlations suggest that inappropriate measures were selected or the measures do not capture the latent construct.

Convergent validity is assessed three ways. First, support for convergent validity can be provided by examining the significance of the parameter estimates between indicators and their constructs. These tests assume a null hypothesis that the parameter value is 0, and thus there is no relation between the indicator and latent construct. Examination of the t-values (.05 significance) of each indicator and construct relation were carried out to determine if each hypothesis should be accepted ($t < 1.96$) or rejected ($t > 1.96$). Additionally, goodness of fit tests can indicate a model's convergent validity. The chi-square test was used to determine the statistical significance of the model. The test measures whether the residuals between the reproduced covariance matrix (based on the latent constructs) and the covariance matrix

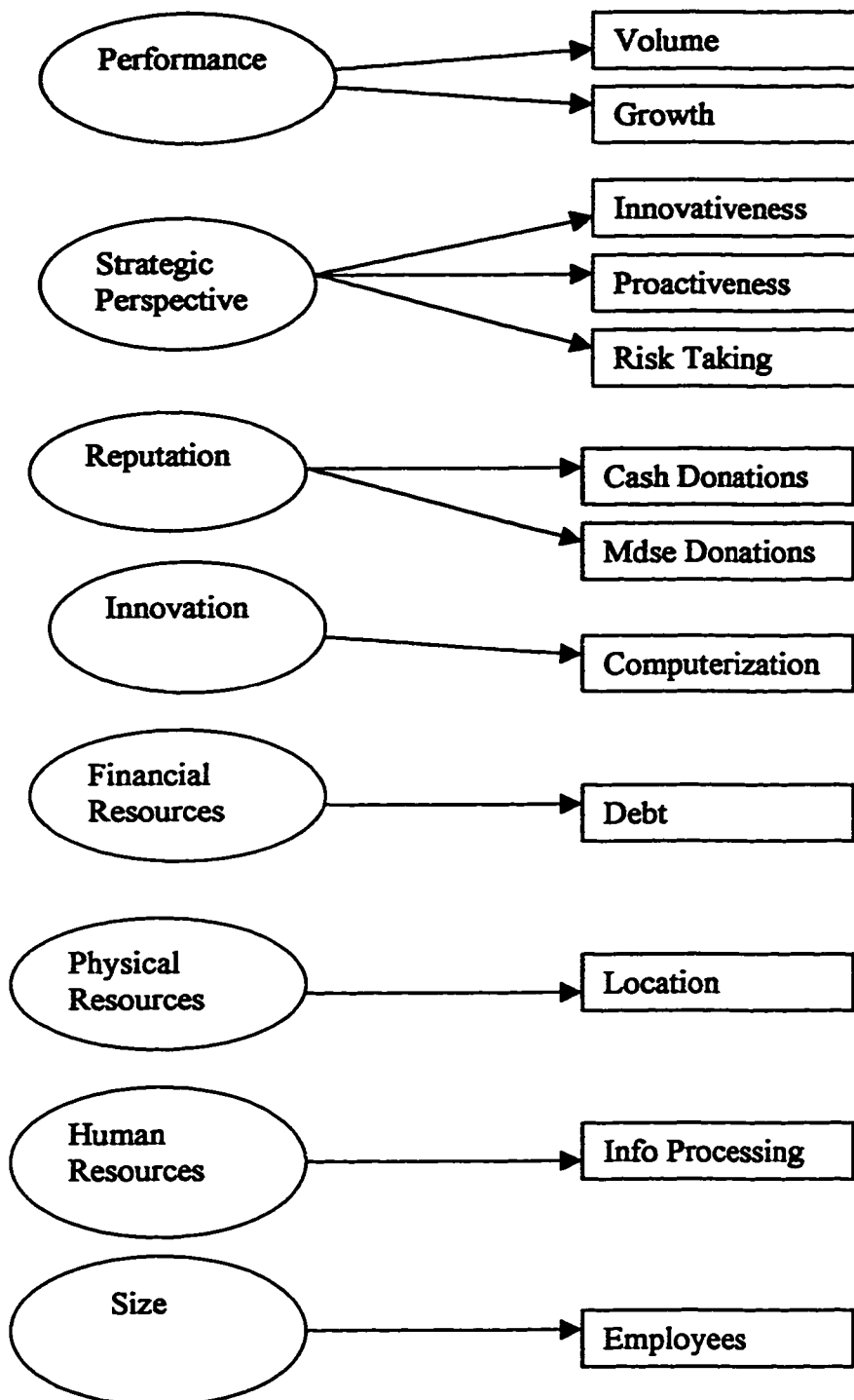


Figure 3
Measurement Model

of the sample (based on observed measures) are significant. If significance is found, it may be concluded that the model does not adequately fit the data because the residuals are excessive. However, because the chi-square statistic is highly sensitive to sample size, significance may be shown even if only trivial differences between the model and the data exist (Anderson & Gerbing, 1988; Bentler & Bonett, 1980). Conversely, as sample size decreases, the chi-square statistic often indicates nonsignificant probability levels (Schumaker & Lomax, 1996).

To overcome potential difficulties interpreting chi-square, a second indicator was used to assess the model's "practical significance" (Bentler & Bonett, 1980). The comparative fit index (CFI, Bentler, 1990), has been recommended as among the best for assessing overall fit (Gerbing & Anderson, 1992). One of its attractions is that it is not sensitive to sample size. The CFI represents a comparison between the estimated model and a null model which assumes no relations between constructs or between constructs and their measures (Hair et al., 1995). Values of the CFI lie between 1 and 0, with .90 considered to demonstrate good fit (Bentler, 1990). A CFI value of .90 indicates that 90% more variance is explained by the measurement model than the null model. Values below .90 indicate that substantial improvements can be made in the model (Bentler & Bonnet, 1980).

In sum, convergent validity was assessed in three ways. Significance testing of parameter estimates between latent constructs and their measures were conducted. Further, Chi-square and the comparative fit index (CFI) were used to assess overall measurement fit.

Discriminant Validity

Discriminant validity represents the degree to which a construct differs from other constructs. It is important differentiate a construct from others that might be similar, and to show what items are unrelated to a construct. It was assessed here through comparisons of the baseline measurement model with alternative nested models in which the correlations between pairs of constructs were constrained to 1.0 (i.e. assuming the two constructs are perfectly correlated). Chi-square difference tests on the values from the constrained and unconstrained models were then examined (Anderson & Gerbing, 1988; Bagozzi & Yi, 1988). A significantly lower chi-square value for the baseline, unconstrained model indicates that the two variables are not perfectly correlated, providing evidence for discriminant validity. In contrast, if the baseline has a significantly higher chi-square value than the nested model, it can be presumed that the two constructs are highly related. This warrants collapsing the constructs into a single underlying factor. In addition to the chi-square difference tests, change in the CFI was also used to assess changes in model fit resulting from collapsed constructs. Widaman (1985) has suggested that CFI changes in excess of .01 indicate a substantive difference between the baseline and nested model.

Structural Model

Anderson and Gerbing's (1988) second stage involves examining relations among the constellation of constructs, including hypothesis testing. The structural model (Figure 2) specifies the hypothesized causal structure among the latent

constructs. Examination of this model included assessment of goodness of fit, the plausibility of alternative models, and the possibility of equivalent models.

Goodness of Fit

Five fit indices were examined to determine the adequacy of the structural model. Chi-square and the CFI, described in discussion of the measurement model, were again used in assessing the fit of the structural model. A third index used here is the Root Mean Square Error of Approximation (RMSEA, Steiger, 1990). The RMSEA provides information in terms of discrepancy per degree of freedom, and thus incorporates parsimony into fit assessment (Browne & Cudeck, 1993). The RMSEA is a particularly valuable goodness of fit measure, because unlike other parsimony indices, this measure does not sacrifice weak but important relations in establishing a model's overall goodness of fit (Williams & Holohan, 1994). A range between .05 and .08 is considered acceptable, with a lower index representing a closer model fit (Hair et al., 1995).

The Expected Cross-Validation Index (ECVI) was also used to assess model fit. The ECVI offers a means of assessing in a single sample the likelihood that a model will be cross-validated across similar sized samples from the same population (Browne & Cudeck, 1989). It is a comparison measure in which lower values represent better model fit. The ECVI also acts as parsimony type measure because it first decreases as parameters are added and then has a turning point such that after achieving its lowest value for the best model, the index then increases as parameters are added. Finally, the

Parsimonious Fit Index (PFI) (James, Mulaik, & Brett, 1982), which takes into account the degrees of freedom used to obtain a given level of fit, was examined. Parsimony is achieved with a high degree of fit for fewer degrees of freedom in specifying coefficients to be estimated.

Alternative Models

Estimation of a series of nested models is recommended when using the two step approach to SEM (Anderson & Gerbing, 1988). This allows comparison between the proposed structural model and a predetermined sequence of potentially better alternatives. Alternative models are established here *a priori* to provide rigorous tests of the relationships between constructs and to avoid data snooping. Consistent with Anderson & Gerbing (1988), the following relationships were compared with the proposed structural model: a) a saturated model indicating relations between all constructs in the model, with or without theoretical support (possibly caused by monomethods bias); b) the next less constrained model, in which a theoretically appropriate linkage is added to the proposed model; and c) the next more constrained linkage, in which the theoretically weakest linkage is deleted from the proposed model.

In this comparison procedure, a nonsignificant chi-square difference between two models indicates that greater parsimony can be achieved without sacrificing fit through adoption of the more restricted model. Adoption of the less constrained model suggests that fit has been improved through the addition of an additional path.

The less constrained model tested here included a linkage between innovation and strategic choice. It could be argued that successful innovation provides incentive

for change in a firm's strategic configuration (Lengnick-Hall, 1992). For example, innovation success may enable a firm to broaden its market appeal through introduction of cost savings and/or unique features. Though not compelling enough for inclusion in the proposed model, this linkage still offers an interesting test because it counters Proposition 1A, that intangible resources influence strategy indirectly.

The more constrained model did not include the linkage between financial resources and strategic perspective. Although theory supports the relation, it may be that the impact is entirely indirect. Managerial perceptions of the amount of financial resources available may influence the strategic choices executives make (Singh, 1986).

As with the nested model testing for the measurement model, the nested structural models were evaluated through sequential chi-square difference tests and changes in CFI. To determine if a nested model provided an improvement in fit, changes in goodness of fit indicators were evaluated for each alternative. If a nested model provided a significant improvement in fit, demonstrated through an increase of more than .01 in CFI (Widaman, 1985), it indicated that the dissertation's proposed model was not the best fitting model.

Equivalent Models

Data sets may contain a number of possible conceptualizations of causal relations between a model's constructs (Bentler & Chou, 1987; MacCallum, Wegner, Uchino, & Fabrigar, 1993). That is, there could be other theoretically plausible models using the same constructs but specifying a different pattern of relations between them.

Equivalent models differ from alternative models in that the number of independent parameters, and thus corresponding degrees of freedom, remain the same. Moreover, in true equivalent models, differences exist only in parameter estimates and their associated t-values and errors. Fit indices remain the same for equivalent models. A method to identify potential equivalent models outlined by Lee and Hershberger (1990) was followed here. Only one of the resultant models, however, was theoretically plausible. Hence, just one equivalent model was tested.

The resource-based view of the firm argues that resource combinations are the foundation of firm strategy (Teece et al., 1990; Chen, 1996). Collis (1991: 51) is explicit on this point: "Strategy is constrained by and dependent on the current level of resources....the firm's asset investments, which in aggregate are the fundamental determinants of its strategic position." However, it can be argued that a firm will acquire or develop the specific resources necessary to carry out the strategies it adopts. If so, financial resources may be causally influenced by strategy. The financial conservatism of family business owners is a commonly accepted tenet, with a degree of empirical support (Friedman & Friedman, 1994; McGonaghy, Walker, & Henderson, 1993; Gallo, 1993). The strategic posture of a business owner may, thus, strongly influence the type and amount of financial resources accumulated. For example, a reluctance to use long term debt may cause a business owner to bolster his/her equity contribution or to seek other investors. Thus, an equivalent model was tested here that reverses causality between strategic orientation and financial resources.

Hypothesis Testing

Hypothesized relationships between the latent constructs were tested through information generated in assessment of the structural model. LISREL 8 provides parameter estimates, standard errors, and t-values for each construct that were used to determine the significance of individual paths in the structural model. Three structural equations incorporating the hypotheses given in Chapter 3 were developed using SIMPLIS command language:

1. Reputation = Financial Resources
2. Information Processing + Financial Resources + Location + Size = Strategic Perspective
3. Strategic Perspective = Performance

CHAPTER 5

RESULTS

Overview of Structural Modeling Results

In this chapter, results from the two stage covariance structure analysis detailed in the previous chapter are presented. Summary statistics for the variables used in the model are presented in Table 2, including mean, standard deviation, reliabilities, and correlations. Discussion of the measurement model results is followed by examination of the structural model results. Results for the hypothesis tests are then considered. First, however, it is important to describe difficulties associated with acquiring data.

Measurement Issues

Tests for nonresponse bias indicated that there were no significant differences between early and late respondents. The two groups were compared on: family business status ($F = .160, p < .690$), number of full time employees ($F = .383, p < .538$), debt/equity ratio ($F = .104, p < .749$), earnings ($F = .297, p < .587$), growth ($F = .148, p < .702$), number of stores ($F = 3.942, p < .117$), and square footage ($F = 1.208, p < .275$). These results suggest no significant differences exist between respondents and nonrespondents (Armstrong & Overton, 1977).

Several other measurement issues needed to be addressed prior to the development of the measurement model. First, indicators of financial resources drew limited response. Items asking for debt and current ratios received the least response, in fact responses were too few to include these items in the analysis. Items addressing the degree of change in these ratios over the previous three years were next examined.

Table 2
Means, Standard Deviations, Reliabilities, and Correlations

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Growth	1.00											
2. Volume	.181	1.00										
3. Innovation	.161	.267*	1.00									
4. Proactiveness	.179	.317*	.627*	1.00								
5. Risk Taking	.100	.339*	.641*	.573*	1.00							
6. Debt/Equity	.004	.024	.009	.029	-.063	1.00						
7. Mdse Donation	.245	.267	-.002	.107	.023	.035	1.00					
8. Cash Donation	.239	.426*	.058	.105	.012	-.014	.230	1.00				
9. Info Processing	.223	.072	.147	.269*	.265*	-.126	.054	.019	1.00			
10. Computerization	.197	.170	.140	.094	.146	.006	.236	.253	.002	1.00		
11. Location	.101	.257*	-.136	.236*	.061	-.020	.132	.033	.012	.104	1.00	
12. Size	.034	.275*	.108	.286*	-.015	.015	.231	.180	-.136	.435**	.246	1.00
Mean	8.19	2.66	11.3	11.38	10.75	.014	6.93	7.06	3.72	2.7	.68	1.52
Standard Deviation	2.76	1.33	4.06	3.79	4.01	1.95	1.5	1.21	.167	1.25	.17	.89
Reliabilities	.034	1.00	.68	.60	.61	.85	.19	.33	.86	.85	.86	.85

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Enough information was provided by the sample to use the information regarding changes in the debt ratio, however the item addressing changes in the current ratio failed to load on the factor. Thus, financial resources have been measured here through a single item indicator, changes in the debt ratio.

Items concerned with reputation measures also presented problems. Natural log transformation was used to overcome skewness and kurtosis for items concerning the value of cash and merchandise donations. The item asking about perceptions of reputation exhibited little variance; very few respondents thought their reputations were less than good. Hence, this item could not be used in the analysis. Scaling was the problem presented by the item asking the price of a diamond solitaire. LISREL 8 is sensitive to differences in scale between items used to measure latent constructs, and indeed between those constructs themselves. In particular, when measures are of vastly different scale, convergence of the solution becomes difficult, if not impossible. An attempt was made to reduce the scale to make it more comparable to the donation items. Because these items had been transformed, the scale reduction required to insure comparability reduced meaningful variance. Subsequently, the solitaire item was dropped, leaving cash and merchandise items to indicate reputational resources.

These same issues were repeated in items associated with physical resources. Skewness and kurtosis were very high for number of locations and perception of location value. The perception item was transformed by using the reciprocal of the square root. However, transformations for number of locations and square footage were

unsuccessful. Thus, perception of a location's value became a single indicator for this factor.

Finally, an offending estimate was encountered in measuring volume.

Following standard practice, the error variance for the volume indicator of the latent construct performance was set to .005.

Measurement Model Analysis

Convergent Validity

The first step in the analysis was to test the proposed eight factor measurement model for convergent validity. Demonstration of convergent validity makes possible the subsequent interpretation of the constructs in the structural modeling process. Results of this analysis are shown in Tables 3-4.

The χ^2 goodness of fit was marginally significant (Table 4), suggesting that the model may not adequately fit the data because its residuals are significant ($n=83$, 32 df, $\chi^2 = 46.73$, $p=.05$). The CFI for the measurement model was .88, providing evidence of a marginally acceptable model fit. The measurement model explained 88% more variance in the sample data than would an independence model that assumes no relationships between the measures and constructs.

Evidence of convergent validity was demonstrated upon inspection of the factor loadings between measures and constructs, as seen in Table 3. All standardized factor loadings were significant, and thus can be considered valid indicators of the latent constructs.

Discriminant Validity.

The next step in measurement analysis was to establish discriminant validity between the constructs. That is, to show that the model's latent factors were indeed unique. Constructs that past research have indicated might be related were collapsed into single constructs, and then assessed for the impact on model fit.

The first model compared to the proposed measurement model tested the possibility that a single construct might best explain variations in the sample data. However, an increase in χ^2 to 7702.27 from the 46.73 found for the proposed measurement model and a CFI of 0.0, down from .88, demonstrates that the model is indeed multidimensional.

Next, financial resources and size were collapsed into a single construct because both are characteristics of the organization. Larger firms are commonly assumed to have "deeper pockets" and thus the possibility existed that these two separate measures were tapping into a common latent construct. With the correlation between financial resources and size set to 1.0, this more constrained model failed to improve the measurement model. Results showed a dramatic reduction in model fit ($\Delta\chi^2_{\text{ldf}} = 1299.8$, $p < .001$). As well, CFI decreased significantly, from .88 to 0. Clearly, these two constructs were unique. Hence there appears to be no relation between debt and size for jewelry retailers.

Next, reputation and size were collapsed into a single construct. Larger firms are typically more visible and recognized competitors than small firms (Aldrich & Auster, 1986). Results of this test were mixed. The χ^2 difference test revealed no

Table 3
Factor Loadings: Measurement Model Compared to Final Best Model^a

Variable	Factor Name	Model 1 - Measurement Model		Model 5 – Final Best Model	
		Loading	T-statistic	Loading	T-Statistic
Growth	Performance	0.51*	1.69	0.51	1.64
Volume	Performance	1.33***	12.77	1.33***	6.10
Innovation	Strategic	3.35***	8.28	3.33***	7.91
	Perspective				
Proactiveness	Strategic	2.89***	7.48	2.94***	7.44
	Perspective				
Risk Taking	Strategic	3.13***	7.70	3.10***	7.40
	Perspective				
Debt/Equity	Finance	1.80***	10.90	1.80***	10.89
Merchandise	Reputation	0.60***	2.95	0.65***	3.21
Donation					
Cash Donations	Reputation	0.67***	3.55	0.69***	4.12
Info Processing	Information	0.15***	10.97	0.15***	10.97
	Processing				
Computerization	Innovation	1.15***	10.89	1.15***	10.89
Location	Physical	0.16***	11.05	0.16***	11.05
	Resources				
Size	Size	0.83***	10.90	0.83***	10.90

^aThis analysis allows a comparison of factor patterns throughout the modeling process

*** p < .001 * p < .10

significant difference at the ($\Delta\chi^2_{1df} = 2.87, p > .05$). Further examination, however, was warranted because the p-value of this test was less than .10. Anderson & Gerbing (1988) have argued that factors do not discriminate if the confidence interval around their correlation includes 1.0. The upper bound is determined by adding two standard errors to the correlation estimate. The upper bound in this correlation was .82 $((.19) + .44)$, suggesting that the correlation is significantly different from 1.0. Finally, CFI dropped to .87 ($\Delta CFI = .01$). This provides additional evidence the constructs are distinct because the reduction equaled .01 (Widaman, 1985). Thus reputation and size remain in the model as separate constructs.

The relationship between location and computerization was also examined for discriminant validity. One perspective is that the degree of computerization and location are both physical resources. Hence, location and computerization were collapsed into a single construct. A statistically significant decrease in fit ($\Delta\chi^2_{1df} = 1152.44, p < .01$) and substantive drop in CFI of -.21, however, supports the distinction between these two constructs.

A final relationship, one testing a relation between location and strategic perspective, was examined because modification indices provided by LISREL 8 suggested such a relationship. Theoretically, it might be possible that holding a “prime” location might influence the factors associated with strategic perspective, innovation, proactiveness, and risk-taking. Location and strategic perspective were thus collapsed into a single construct. Results supported maintaining the separation of these constructs ($\Delta\chi^2_{1df} = 78.54, p < .01$).

In summary, five alternative models were tested against the proposed measurement model in examination of discriminant validity. It was found that the eight factors in the model were indeed separate and distinct, and thus the model was not modified before the second stage of analysis was undertaken.

Structural Model Analysis

In this stage of analysis, evidence to support the structural model and its associated five hypotheses was examined. This was done through consideration of overall model fit and through inspection of parameter estimates.

Structural Model Evaluation

Using the model comparison procedure recommended by Anderson & Gerbing (1988), a series of nested models were evaluated. Models 1-5 in Table 4 were compared while examining the theoretical model and sequential χ^2 difference tests were used to obtain successive fit information (Steiger et al., 1985). These tests enabled the derivation of a final best model that was theoretically meaningful and free from obvious specification problems. Results of the difference tests are provided in Table 5.

First, the proposed theoretical model (model 2) was compared with the previously estimated measurement model (model 1). Technically, the latter is the equivalent of a saturated structural model (Netermeyer et al., 1990; Mulaik et al., 1989; Bentler & Bonnet, 1980) in which all one-way structural paths among latent variables are estimated. The theoretical model has 12 fewer paths than the fully saturated model. A deterioration in fit would suggest that removal of some of the paths may not be warranted.

Table 4
Model Statistics

Model	Description	χ^2	df	p	RMSEA	RMSEA-CI	ECVI	ECVI-CI	PFI	CFI
1	Measurement	46.73	32	.05	.075	.012; .12	1.69	1.52; 1.96	.38	.88
2	Theoretical	65.62	44	.02	.077	.032; .11	1.63	1.41; 1.94	.45	.80
3	Next – best constrained	65.63	45	.02	.075	.028; .11	1.61	1.39; 1.92	.46	.81
4A	Next – best Unconstrained	64.96	43	.02	.079	.034; .12	1.65	1.43; 1.96	.44	.80
4B	Next – best Unconstrained	53.52	43	.13	.055	0.0; .097	1.51	1.38; 1.78	.49	.90
5	Final Model	53.53	44	.15	.051	0.0; .094	1.48	1.37; 1.76	.50	.91

Table 5
Testing Sequence and Difference Tests

Comparison	$\Delta\chi^2$	Δdf	p ^a	Model Preference
Model 2 vs. 1	18.89	12	NS, >.05	2
Model 3 vs. 2	.01	1	NS, >.05	3
Model 4A vs. 2	.66	1	NS, >.05	2
Model 4B vs. 2	12.10	1	SIG, <.01	4B
Model 5 vs. 4B	.01	1	NS, >.05	5

^aProbabilities are stated in inequality terms as chi-square tables are sparse

Results of this model comparison were mixed. Not surprisingly, χ^2 rose because more constraints were placed on the model through the removal of paths ($\Delta\chi^2_{12df} = 18.89$, $p > .05$). As well, there was a slight decline in RMSEA from Model 1 to Model 2 ($\Delta\text{RMSEA} = .02$). However, the baseline structural model's RMSEA (.079) still fell within the acceptable range. CFI also fell ($\Delta\text{CFI} = .08$). On the other hand, ECVI dropped from 1.59 to 1.63 ($\Delta\text{ECVI} = .06$) and the PFI increased from .38 to .45 ($\Delta\text{PFI} = .07$). The sequential χ^2 difference test indicated nonsignificance ($\chi^2 = 65.62$, $\Delta\chi^2_{12df} = 18.89$, $p > .05$), thus providing enough evidence to support the acceptance of Model 2, the theoretical model, over Model 1. The mixed result is noteworthy, however, in that it suggests that at least one of the paths removed from Model 1 was a valuable part of the model. Subsequent nested model comparisons between the theoretical model and less constrained models will help identify which path (paths) should be in the final model.

The next model comparison was between the theoretical model (Model 2) and the next best constrained model (Model 3). In the more constrained Model 3, the link between financial resources and strategic perspective was eliminated as proposed in Chapter 4. Results showed a .01 increase in both the CFI and PFI for Model 3 (CFI = .81, $\Delta\text{CFI} = .01$; PFI = .46, $\Delta\text{PFI} = .01$), as well as .02 decreases in both RMSEA and ECVI (RMSEA = .075, $\Delta\text{RMSEA} = .02$; ECVI = 1.61, $\Delta\text{ECVI} = .02$). The sequential χ^2 difference test was not significant ($\chi^2 = 65.63$, $\Delta\chi^2_{1df} = .01$, $p > .05$). Because Model 3 is more constrained than Model 2, it was the preferred model in this comparison.

The third model comparison was between the theoretical model (Model 2) and the next best unconstrained model (Model 4A). As outlined in Chapter 4, this less

constrained model featured an added path between innovation and strategic perspective. The less constrained Model 4A showed .02 increases in RMSEA and ECVI (RMSEA = .079, Δ RMSEA = .04; ECVI = 1.65, Δ ECVI = .03). Further, while CFI remained unchanged, the PFI decreased by .01 (CFI = .80; PFI = .44, Δ PFI = .01). The nonsignificant χ^2 difference test indicated that the more constrained model, Model 2, should be preferred over Model 4A ($\chi^2 = 64.96$, $\Delta\chi^2_{1df} = .66$, $p > .05$).

A second less constrained model was also tested. The modification indices provided by LISREL 8 consistently, through each model iteration, indicated a strong relationship between reputation and performance. Although not originally conceived within the framework of the theoretical model, this linkage was not without theoretical and empirical support. Reputation has long been perceived as the most vital of intangible resources to a firm's survival and success (Hall, 1992; Rao, 1994). It is plausible that reputation has a direct, positive impact on firm performance in addition to its posited indirect effects on strategic perspective. Thus the decision was made to test a model (Model 4B) including this path. Results were impressive. RMSEA dropped to .055 (Δ RMSEA = .022). Similarly, ECVI decreased to 1.51 (Δ ECVI = .12). Further indication of the strength of this model was demonstrated in a .04 increase in PFI (PFI = .49, Δ PFI = .04) and most significantly by a large improvement in CFI (CFI = .90, Δ CFI = .10). The sequential χ^2 difference test was significant ($\chi^2 = 53.52$, $\Delta\chi^2_{1df} = 12.10$, $p < .001$), making this less constrained model the preferred model.

A final best model was then constructed (Figure 4). In Model 3, the next best constrained model, the removal of the linkage between financial resources and strategic

perspective produced improvement to the theoretical model. The decision was made to test a model (Model 5) that featured the addition of the path between reputation and performance tested in Model 4B and the removal of the path between financial resources and strategic performance. This model was compared to Model 4B. Results showed a .01 increase in PFI and CFI (PFI = .50, Δ PFI = .01; CFI = .91, Δ CFI = .01). RMSEA decreased to .051 (Δ RMSEA = .04) and ECVI to 1.48 (Δ ECVI = .03). The sequential χ^2 difference test was not significant ($\chi^2 = 53.53$, $\Delta\chi^2_{1df} = .01$, $p > .05$), and so the more constrained Model 5 became the best model, following Anderson & Gerbing's (1988) decision tree framework.

The proposed equivalent model was compared with the theoretical model as well. As is the case with equivalent models, fit indices remained the same. Parameter estimates failed to change as well, with the exception of the link between financial resources and strategic perspective. In the theoretical model, this parameter estimate for the path leading from financial resources to strategic perspective was a nonsignificant .03 ($t=.24$). In the equivalent model, with the linkage reversed, the path estimate was nonsignificant with a value of -.01 ($t=.10$).

Hypothesis Testing

Hypotheses were evaluated using path coefficients obtained through the structural modeling process. Although an overall model may show satisfactory fit, some parameters may not achieve significance. Table 6 shows the hypotheses and results associated the final model. Path coefficients for the original model have been

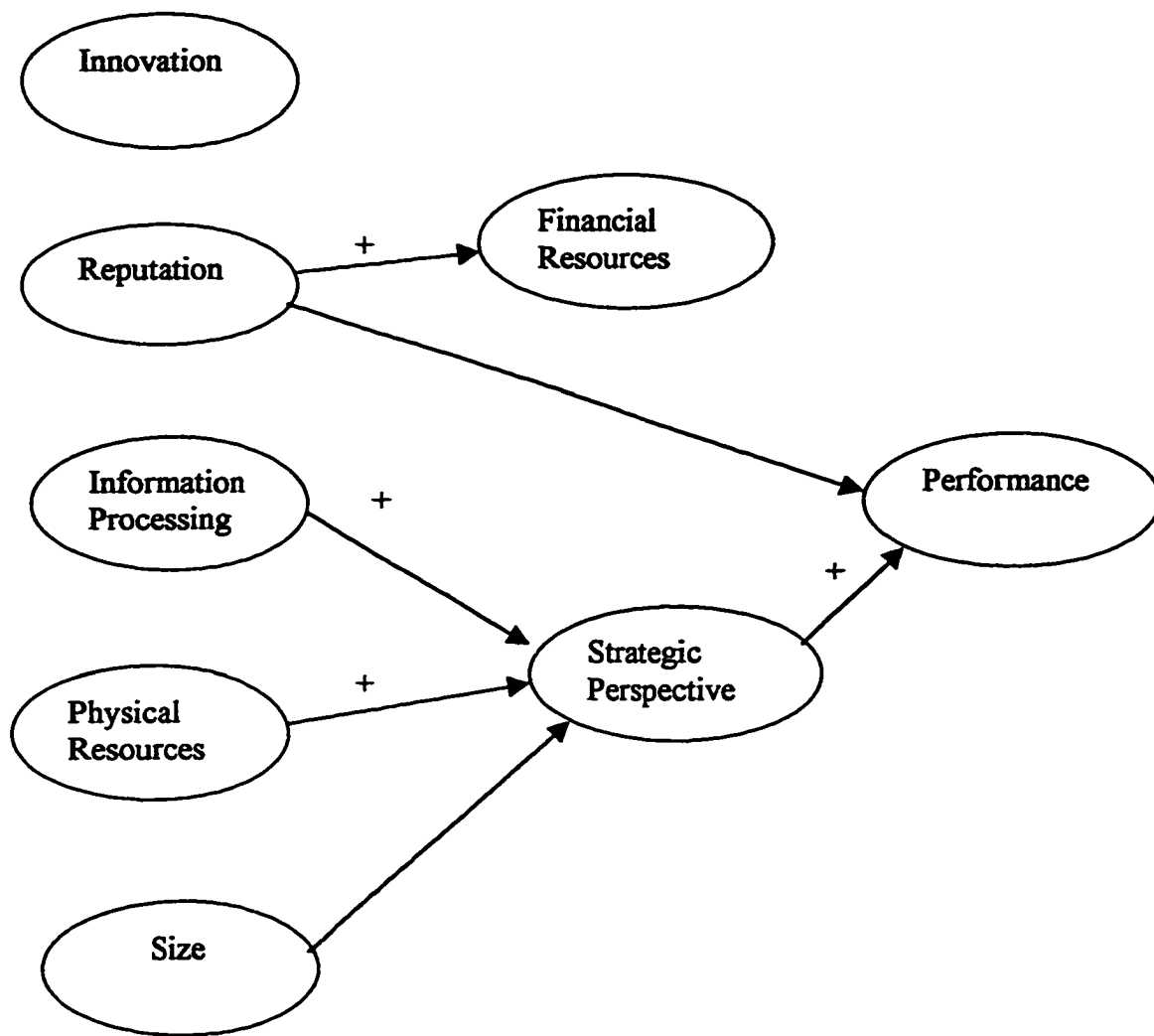


Figure 4
Final Structural Model

included in the table to allow for comparisons. All path estimates have been standardized. Error terms have thus been deleted, as they do not pertain to standardized values.

Hypothesis 1, that reputation has a positive impact on the accumulation of a firm's financial resources, was not supported. The path coefficient of .02 failed to reach significance.

The hypotheses linking tangible resources to strategic performance yielded mixed results. Hypothesis 2, the path between information processing and strategic perspective, with a path coefficient of .33, was significant at the .05 level. It appears that the information processing capabilities of the management team influences the strategic perspective of the firm. Hypothesis 3, that financial resources positively influence a firm's strategic perspective, was not supported with a parameter estimate of .03 in the theoretical model. This link was deleted in the final model. A linkage between location and strategic perspective, hypothesis 4, also failed to find support. The path coefficient for this path was -.01 in the final model.

Importantly, the path between strategic perspective and performance was significant at the .01 level with a path coefficient of .31 in the final model. Thus, hypothesis 5, that there is a positive relationship between a firm's strategic perspective and its performance, is supported. Two other results warrant mention. First, the control variable size was found to positively influence strategic perspective. The path coefficient for this path, .23, achieved significance at the .10 level. Second, a special path between reputation and performance was added during model respecification (in

Table 6
Structural Equation Modeling Results Comparing Hypothesis Tests for the Theoretical and Final Best Models

Hypothesis	Description of Path	Direction	<u>Theoretical Model</u>		<u>Best Model</u>	
			Path coefficients	t values	Path coefficients	t values
1	Reputation -> Financial Resources	+	0.01	0.03	0.02	0.17
2	Info Processing -> Strategic Perspective	+	.35*	2.57	.33*	2.48
3	Financial Res. -> Strategic Perspective	+	0.03	0.24		
4	Location -> Strategic Perspective	+	0.01	0.07	-0.01	-0.09
5	Strategic Perspective -> Performance	+	.40*	3.22	.31*	2.68
Control	Size -> Strategic Perspective		.26*	1.86	.23*	1.64
Added path	Reputation -> Performance				.64*	2.9

the next-best unconstrained model 4B). This path in the final model was strongly significant at the .01 level, with a path coefficient of .64.

In sum, of the original five hypotheses, four were tested in the final model. Two of these were supported, the link between information processing and strategic perspective, and between strategic perspective and performance. Additionally, an added link between reputation and performance was highly significant.

CHAPTER 6

DISCUSSION

This dissertation used structural equation modeling to explore the relationships between resources, strategic perspective, and performance in family businesses. Despite the importance of family business in the American economy, there has been little research to help understand and further their success. Not only has the family business literature underutilized strategic management theory, and thus overlooked powerful tools to better elucidate family business phenomena, but research in strategic management literature has focused on large, publicly held corporations. To help fill this gap, the theoretical model developed and tested in this study examined the resource-based view of the firm within the context of family businesses, specifically family owned jewelry stores.

In this chapter, the theoretical and analytical implications of the results are discussed. First, implications associated with the measurement model are addressed. Next, the results obtained through testing the comprehensive structural model are examined, followed by future research opportunities suggested by the study's theoretical and practical implications. Finally, limitations are discussed.

Discussion of Findings and Implications

A two stage process was used to evaluate the causal model proposed in this study (Anderson & Gerbing, 1988). In the first stage, a measurement model was proposed and tested for convergent and discriminant validity. After determination of an acceptable measurement model, a structural model was developed that specified the

relationships among the constructs. This model was subsequently tested in a series of nested models. Both stages of model fit determination are discussed next.

Model Fit

Measurement Model Analysis

First, the proposed model was tested for convergent validity. Examination of χ^2 and the CFI provided evidence that the model had acceptable fit. Further, the measures selected loaded significantly on their proposed latent constructs. Convergent validity was demonstrated for reputation, computerization, information processing, location, financial resources, strategic perspective, performance, and size. A valuable contribution is made by this study through its successful use of proxy measures to indicate otherwise unobservable resources. The resource-based view has had limited empirical examination, due in part to the difficulty in measuring intangible resources. The utilization of viable proxies for firm-specific resources allows testing of this important theory to move forward (Godfrey & Hill, 1995).

The operationalization of two constructs, in particular, represent a step forward. First, research in the resource-based literature typically conceptualizes top management teams in demographic terms, such as years of experience, tenure, education. This may stem from the archival availability of this information. However, by examining the information processing function through which top management teams understand their environments, this study has portrayed a broader view of human resources in family jewelry stores.

Further, the use of charitable contributions as a proxy for firm reputation is also valuable. Studies of reputation have typically focused on large firms and relied on the attributes considered in Fortune's annual corporate reputation ratings to measure the construct (c.f. Fombrun & Shanley, 1990; Sobol & Farrelly, 1998). Attributes on which corporations are evaluated include investment value, financial soundness, use of corporate assets, quality of management, quality of products and services, innovativeness, ability to get, develop, and keep talented people, and social responsibility. Very little of this information is available for privately held firms. Further, heavy reliance on the Fortune rankings has been criticized as measuring the extent to which a firm is perceived as striving for financial goals (Fryxell & Wang, 1994). However, study has shown that publics judge the concern firms show for the wider society (Pfeffer & Salancik, 1978). A tangible way, then, to quantify such community concern for family firms is through their charitable contributions. The value of this conceptualization is that it captures the more intangible nature of reputation as a generalized and ongoing social construction.

Tests of discriminant validity were then carried out to determine that the constructs proposed in the model were distinct. An initial test to determine if a single construct best explained variations in the data showed that the proposed model was multidimensional. Next, constructs that may have related to each other were tested to see if they were, in fact, unique. Four pairs of constructs were tested based on theoretically plausible linkages. These were financial resources and size, reputation and

size, location and computerization, and location and strategic perspective. Results showed that the eight factors proposed in the measurement model were distinct.

Of these construct pairs, the two involving size are of particular interest. Large organizations are implicitly assumed to have greater access to capital and to have positive reputations by virtue of their size, in essence size acts as a proxy for other resources (Aldrich & Auster, 1986). The reputation literature suggests that in the process of successful growth, firms are signaling to stakeholders that they have the support of the market. Although it would seem that at some level size is tapping into a latent construct also associated with financial resources or reputation, the results here indicate that each of the constructs is unique.

Taken as a whole, the constructs offered in the measurement model provide a richer understanding of resources through the use of proxy variables for complex latent variables. Further, the constructs that form the base for the study demonstrated convergent and divergent validity. Of particular interest was the finding that size, while often considered as an indicator of the presence of specific resources, is a distinct concept in and of itself. Support for the measurement model set the stage for analysis of the structural model.

Structural Model Analysis

The relationship between resources and performance has been much studied, but far less attention has been given to understanding *how* this relationship occurs. Studies have shown a direct linkage between resources and performance (c.f. Levinthal & Myatt, 1994; Hall, 1993, 1992), but less attention has been paid to investigating the indirect

effects of resources on performance through their impact on strategy. Work by Chatterjee & Wernerfelt (1991) strongly suggests that the link between strategy, conceptualized as diversification in their study, and performance can only be understood in light of firm resources. This highlights the importance of better understanding the indirect effects of resources on performance. In the proposed theoretical model, four of the six paths represented indirect effects of resources on performance. The results of the structural model analysis are discussed next.

Although results of structural analysis suggested that theoretical model (Model 2 in Table 4) was preferred over the measurement model, clearly there was room for improvement in how well the model reproduced the sample covariance matrix. Alternative models were tested to determine the model that provided the best fit. The first alternative model (Model 3) removed the link between financial resources and strategic perspective to assess the possibility of an indirect rather than direct effect of financial resources on strategic perspective. Perhaps managers make strategic decisions based on their perceptions of the firm's financial resources. In fact, analysis demonstrated that removal of the link improved model fit. This result, an indirect role for financial resources, provides the first hint that perhaps financial resources are not as critical for family firms as was previously thought.

The next alternative model (Model 4A) added a link between innovation, conceptualized as computerization, and strategic perspective. This was carried out to determine if an intangible resource could have a direct rather than indirect effect on strategic perspective. Preference for the theoretical model suggests that in fact,

intangible resources do not have direct bearing on strategic perspective, offering initial support for Proposition 1A.

Another less constrained alternative model (Model 4B), featuring a link between reputation and performance, was tested. This path was strongly suggested by LISREL 8 modification indices and was added only because it had received theoretical and empirical support in the literature. This model greatly improved the fit of the model and suggests that in addition to indirect effects, reputation has a direct role in performance.

A final model (Model 5) was constructed to determine if model fit could be further improved. The link between financial resources and strategic perspective was removed and the link between reputation and performance was kept. This model provided the strongest reproduction of the sample covariance matrix and makes an important contribution to our understanding of resources in the family firm. It incorporates the direct effects of reputation on performance. Previous research has most often examined direct effects of resources on performance. This project focused on the indirect performance effects of resources. The final model provides a test of both and thus offers a more comprehensive understanding of resource configurations, strategy, and performance in family firms than previous research.

Theoretical Implications and Hypothesis Testing

This study has made several contributions to the strategic management and family business literatures. In this section, the implications of these contributions for theory are developed. Following an examination of the study's theoretical implications, hypotheses test results will be discussed.

Theoretical Implications

Proposition 1A, that tangible resources mediate the relationship between intangible resources and strategy, received mixed support in this study. Although initially supported in alternative model testing, the seeming unimportance of reputation to financial resources in this sample makes the relationship between intangible and tangible resources less clear. It may be that other linkages might have better elucidated the intangible-tangible link. For example, if information processing by the top management team is a vital resource, a reputation that attracts talented managers might be a critical antecedent. The results reported here represent an important first step in understanding how resource bundles are configured. Further work is needed to untangle the web woven by resource interdependency. In addition to examination of different intangible-tangible resource combinations, research focusing on the content and process of resource development, the antecedents of a firm's resource configuration, is needed. Understanding why particular resources were valued over others and how they were gathered into the firm can offer valuable insight into their development and combination within the firm.

An implication arising out of the test for Proposition 1A, the relationship between reputation and financial resources, suggests that the strategic management literature has been limited in its understanding of the importance of financial resources because the focus has been their effects on diversification strategies. Such growth may be the desired outcome for many firms, but subordinate to different outcomes in others,

notably family firms. For example, these firms may view outcomes such as survival or the continuation of family involvement in the firm as more important goals. A contribution of this study is its consideration of resources in an alternative strategic context. The results imply that resource desirability is linked to strategic context, and further that resource preferences will vary among firms with different desired performance outcomes. Identifying differences in valued performance outcomes and the resource preferences associated with those outcomes represent a significant opportunity for future research efforts

Proposition 1B, that tangible resources impact firm performance through their influence on strategy, was moderately supported. Although financial and location resources did not significantly influence strategic perspective in this sample, information processing was strongly related to the development of broader strategic perspective. Further, strategic perspective was positively linked to performance in this study. The focus of this dissertation was the indirect effects of resources on strategic performance. To more completely understand the relationship between resources, strategy, and performance, direct and indirect effects should be examined in tandem.

The strategic management literature is only now beginning to address the importance of reputation for firms. The findings here suggest a substantial direct effect on performance, in addition to any indirect influence on strategic perspective that might be present in the final model. The use of proxies to measure reputation, dollar values of charitable contributions in this study, provides a valuable means through which to further our understanding of this key resource and other intangible resources.

Hypothesis Tests

With indirect effects as a focus, the hypotheses proposed herein examined the relationships between intangible and tangible resources, between resources and strategy, and ultimately between strategy and performance. The following section discusses the results of those hypotheses.

Information Processing and Strategic Perspective

This study provided evidence that information processing has a direct effect on an organization's strategic perspective. This is an important finding for several reasons. First, a common, but untested perception about family business is that key decisions are made by individuals, such as the founder or the current CEO. This is magnified when the businesses under study are small, with few employees and even fewer individuals identified as part of the top management circle. However, results of this study suggest that even in very small family businesses, information processing is a participative activity. Open discussion of important issues rather than management by fiat is the norm.

Second, the positive relation between information processing and strategic perspective emphasizes that family firm decision makers do not limit their market perceptions, but in fact are actively engaging in processes to better understand and compete within their chosen environments. On its face, it might seem surprising that these decision makers would perceive a need to closely monitor their industry when it has historically been so stable. Results of this study, however, support an alternative view suggested by the information processing literature, which says that information

processing influences the development of a broader strategic orientation. The groups of firms sampled here approach proactiveness, innovation, and risk-taking, the components of strategic perspective, more readily than many might expect because their information processing activities have increased their market awareness. It appears that these firms have placed an increased importance on information processing and further, recognize the value of the information they take in for formulating their strategies.

One explanation for this finding is that the retail jewelry industry, traditionally considered a stable environment, is confronting competitive forces that are changing the face of this market. The advent of larger and more numerous jewelry store chains, the arrival of “online” commerce, and even QVC and the Home Shopping Network have greatly increased the complexity and competitive dynamic associated with the industry. The ability of family business owners to process the complex changes in their industry and translate that information into effective strategic actions will be a crucial component for their continued survival.

In summary, these results are consistent with the extant literature that has explored ties between information processing and strategy. Results suggest that information processing has a positive effect on strategic perspective. This is important because it counters conventional wisdom on decision making in family firms. Family-owned jewelry stores are interactive and participative in their information processing, and this enables them to evaluate a broader range of strategic options. To the degree that family firm decision makers relate their resource configurations to the strategic

options under consideration, this study suggests there is little difference between the CEO in a family firm and their Fortune 500 counterparts.

Reputation and Financial Resources

It was proposed that reputational resources positively influence the development of financial resources. This was expected because previous research in entrepreneurship and institutional theory has suggested the importance of reputation in funding acquisition. However, results failed to confirm this expectation. Several possible explanations might account for this finding.

First, a key reason for this finding likely lies in the nature of family business. Previous research has shown that family firms are less capital intensive (Friedman & Friedman, 1994), operate with lower costs than other businesses (McGonaghy, Walker, & Henderson, 1993), and are characterized by slower growth (Gallo, 1993). This suggests that the acquisition of financial resources may not be as critical to these firms. Perhaps more importantly, internally-generated financing is preferred by small family firms (Landstrom & Winborg, 1995; Holmes & Kent, 1991). Family firms have lower debt/equity ratios and higher levels of liquidity (Kleiman et al., 1996). These firms do not actively seek external sources of funding until internal sources have all been utilized.

A second possible explanation for a failure to detect a relation between reputation and financial resources lies in the distinction between entrepreneurship and family business. The entrepreneurship literature is replete with evidence suggesting the importance of financial resource acquisition, particularly for new venture creation. Entrepreneurial firms, particularly those close to start-up, tend to have fewer established

financial relationships and typically low levels of retained earnings (Brown & Kirchhoff, 1997). These firms must actively cultivate the reputational signals needed to secure needed financing. In an established family business, however, it is likely that the owners have established relationships with banks and other institutions. It is possible that these linkages are perceived as “given”. If so, less effort is required to maintain the relationship. That is, in entrepreneurial firms, reputation-building as a venue to other needed resources is a much more consuming activity. Reputation maintenance, while still important to the family firm, may no longer be a conscious activity, but rather an ingrained facet of its culture. This suggests an interesting venue for future research – do firms internalize intangible resources into meaningful norms and processes and how does this influence strategy and performance?

Financial Resources and Strategic Perspective

The hypothesized relationship between financial resources and strategic perspective was not supported. Following the strategic management literature, financial resources were construed as access to capital. Access to capital allows the firm to compete more aggressively in its environment, provides a cushion of resources for the firm that buffers it from environmental downturns, and provides funds for innovation (Bourgeois, 1981; Thompson, 1967; Cyert & March, 1963). It was argued here that greater financial resources enhanced strategic perspective, making possible innovation, new market development, facility upgrades, and technology investment (Lubatkin & O'Neill, 1987; Bourgeois, 1981; Hambrick & Snow, 1977; Thompson, 1967). However, financial resources appear less important to the family firms studied here.

Perhaps the selected industry has an impact. Retail jewelry stores are not centers of high technology, nor has there been a considerable shift in the industry's consumer base. Further, although current trends suggest that this industry is beginning to undergo change, the industry is currently characterized as stable. The numerous strategic options made possible by a strong financial resource base may not be considered relevant by this sample.

The lack of support for the relationship between reputation and financial resources and between financial resources and strategic perspective raises questions about the value of financial resources for this sample. It may well be that for family jewelry stores financial resources are not considered as critical as other resources. This is an interesting concept. The extant literature in strategy and entrepreneurship has generated streams of research on raising funds to finance continued growth and expansion (e.g. IPOs, LBOs). It is not clear that these performance goals are consistent with those of family firms. If the results found here can be replicated in studies of family businesses in other industries, then an important step to understanding resource configuration differences between family firms and other firms will have been made. This is an exciting opportunity for future research.

An alternative explanation for the nonsignificance of financial resources in the study stems from missing data. Study respondents, true to the norm in family firm research, were extremely reluctant to disclose information they perceive as confidential. This was an issue primarily for those items assessing financial resources. Pairwise deletion was used to deal with missing values in generating the covariance matrix for

LISREL 8. In this procedure, the correlation coefficient between a pair of variables is calculated based on all cases with complete information for the two variables, regardless of whether the cases have missing data for any other variable (Norusis, 1993). A problem associated with pairwise matrices is inconsistency, in which some relationships between coefficients occur that are clearly impossible. That was not encountered here. However, significance levels obtained from analyses based on these matrices should be analyzed with caution.

Physical Resources and Strategic Perspective

The hypothesis that physical resources, measured here as location, have a direct positive impact on strategic perspective was not supported in this study. This was truly unexpected. “Location, location, location” has long been a cornerstone of retail operation. Why then, was that not the case here?

Most would agree that a relationship exists between location and strategy. For example, jewelers located in upscale malls may adopt differentiation strategies while those with locations in strip malls favor cost leadership strategies. However, the strategic context under study here is strategic perspective, characterized by proactiveness, innovation, and risk-taking. The perceived value of location may not have a direct influence on those strategic perspective components.

Another potential explanation for this finding lies in the differences between product categories. The marketing literature has identified product categories – convenience, shopping, and specialty. Convenience goods are inexpensive goods and services that consumers purchase frequently and want to buy with the least possible

effort. Shopping goods are distinguished by an information search on the part of the consumer. These are products that consumers buy after carefully comparing price, quality, and service. Specialty products are goods and services for which there are no acceptable substitutes – buyers know what they want and will go wherever they must to purchase it. Brand name is extremely important here.

Jewelry stores feature products and services that are classified as shopping and specialty goods. Convenience is not as compelling for consumers of these products. Location means far less than quality, value, and service – attributes commonly associated with reputation. For jewelry stores, other resources may be viewed as more important than location, notably reputation. Jewelry buyers are concerned about genuine stones, gold rather than goldplate, and service that does not include substitution with less valuable stones, settings, or watch movements. They will travel out of their way to do business with a firm they trust.

Thus, for the sample studied here, location may be less important to determining strategic perspective than other resources. It may be that these firms do not consider the value of their location when determining strategic perspective because they do not believe that it is a concern for their customers. If customers are coming to a store in spite of a less desirable location, it might be hard for the store owner to identify location as an issue.

These results could also stem from a measurement issue. Physical resources may influence strategic perspective but location might inadequately capture physical resources. It may be that other types of physical resources affect the characteristics of

strategic perspective. For example, if customers perceive jewelry as a shopping or specialty good, then inventory could be critical. The number of product lines carried, number of brand names offered, and price ranges of merchandise are potentially more meaningful indicators of physical resources for this sample. This suggests that future research should examine the importance of a broader array of physical resources.

Strategic Perspective and Performance

A key finding in this study is that strategic perspective has a positive influence on firm performance. This is important for several reasons.

The results reported here furthers the perspective in the strategic management literature that managerial choices made by top managers directly influence firm performance (Child, 1972). Strategic choice has found empirical support (e.g. Carr, 1993; Robins & Wiersema, 1995) in studies of large diversified corporations. Less is known, however, about the impact of strategy in family-held firms. For this sample, broader strategic perspective impacts performance. Simply put, strategy also matters for family firms.

Successful family jewelers are commonly perceived as “conservative” and “traditional”. It is important to note that even if these perceptions are accurate, they do not preclude the “traditional” firm from maintaining a broader strategic perspective. Remember that firms with a broader strategic orientation are better able to identify the resources contributing to core competencies. If these jewelers understand that reputation based on conservative and traditional product lines and business practices is a key resource, then exploiting that strength is critical. If these same jewelers perceive

industry changes, their broader strategic perspective will also enable them to configure their resources to most effectively meet new challenges.

Most empirical studies of the resource-based view have framed strategy in terms of diversification, thus giving little insight into the strategy-performance relationship for firms without the desire or resources to diversify. The findings of this study are based on a sample of firms that are not diversified, and thus a contribution has been made to the resource-based view of the firm. The results reported here expand the scope of resource-based view through examination of a different strategic context - strategic perspective.

Our understanding of family business is also enhanced by this finding. The extant literature in family business has suggested that family firms subordinate family issues to business issues, and that family firms are less “professional” than firms with other ownership structures (c.f. Levinson, 1971; Dyer, 1994). These results, however, suggest that family firms do develop strategic perspectives that enable them to commit to performance-driven strategies. This supports earlier work that found no differences between the strategic postures of family firms and non-family firms (Daily & Thompson, 1994). It is important to note that this does not contradict research in the strategic management literature that suggests owners make different strategy choices than managers. Strategic perspective has been defined here as the shared, common beliefs and values (Mintzberg, 1987; Weick, 1985) which act as lenses through which managers perceive their world (Donaldson & Lorsch, 1983). It is through perspective that the family firm develops its strategic choices.

In summary, both the strategic management and family business literatures are extended by the positive relationship between strategic perspective and performance found here. Although clear differences exist between family and non-family firms in other aspects, both groups recognize the importance of their strategic choices.

Reputation and Performance

One of the most interesting results of this study is the strong direct relationship between reputation and performance. In fact, this was the strongest relationship in the final model ($\gamma = .64$). The strategic management literature has not arrived at consensus on the linkage between these two constructs. The resource-based view of the firm identifies reputation as a strong contributor to firm performance. Other work has posited that firm reputation only marginally affects performance (Fombrun & Shanley, 1990). Few empirical studies have demonstrated the effects of reputation, due in part to the difficulties associated with its measurement (Godfrey & Hill, 1996; Fombrun & Shanley, 1990). However, those studies that have considered the impact of reputation on performance empirically have shown a direct influence (Hall 1993,1993; Rao, 1994). The results here are consistent with those findings.

This is important because, as mentioned in Chapter 2, previous research has only studied the direct relationship between reputation and performance. The indirect effects of reputation, both through development of other resources and strategies, have not been considered. This study specifically sought to examine those indirect effects and makes a contribution in demonstrating that direct effects between reputation and performance persist even after indirect effects are taken into account.

When considered with the direct relationship between strategic perspective and performance, these results suggest that a solid reputation provides a safety net for firms with a limited strategic perspective. Recall that these firms perceive fewer options and select from a narrower range of strategies than their competitors with broader perspective. Thus, it may be that firms with inappropriate or ineffective strategies are able to prosper because they are buffered from the consequences of their choices through the value that customers place on the firm's reputation.

Taken further, firms that understand this value of their reputation might choose to make it the prominent component in their resource configurations, thus channeling other resources into the optimization of reputation. In that this decision reflects strategic consideration about how best to compete, the indirect importance of reputation to firm performance is also seen.

Thus for jewelry stores in this sample reputation is a critical determinant of their performance. This empirical finding strengthens the resource-based view of the firm, which proposes that intangible resources are more important contributors to sustainable competitive advantage than easily duplicated tangible resources.

Finally, the possibility that the direct relationship between reputation and performance is a function of the operationalization of reputation must be considered. Although reputation, here conceptualized as charitable contributions, was found to have a direct influence on performance, it may be instead that performance impacts charitable contributions. That is, firms with higher levels of performance can afford

greater generosity. Previous research on this “which came first” issue has been inconclusive (Thompson et al., 1993).

Family Firm Differences

The preceding discussion demonstrates the ambiguous nature of the family firm. Although family firms are different from entrepreneurial or small businesses, the overlap between the three types of firms is great. And pervasive. Despite the strong focus on family firms and a conscious effort to develop hypotheses appropriate to family firms, entrepreneurial conceptions were also embedded in the hypotheses. This is best highlighted by the discussion on the links between reputation and financial resources and financial resources and strategic perspective. Underlying the development of those hypotheses was an unrecognized yet implicit assumption that financial resources are critical for family businesses, and that growth is the preferred outcome. In fact, the nature of family business suggests that the resource configurations and goals of family firms are decidedly different from those of their entrepreneurial “cousins”.

This demonstrates just how easily mental models can affect research design, a potential hazard even for those well versed in their literatures. Many people’s schemas for family firms include characteristics like small, young, trying to grow. If we hope to inform the family business literature, great care must be taken to clearly distinguish these firms from other types of businesses.

Implications for Family Business Owners

The results of this study have important implications for family firms in the retail jewelry industry. First and foremost, the value of a firm’s reputational resources

to its performance cannot be understated. Customers in this market are driven not by convenience, but rather by perceptions of quality and trust. Together with a customer's prior experiences and the recommendation of trusted friends and advisors, these factors act as the signals through which reputation is generated (Fombrun & Shanley, 1990).

That said, it seems natural that the retail jewelry trade would have a high concentration of family firms. Studies have shown that family firms are perceived to have greater commitment to quality (Lyman, 1991), a greater emphasis on preserving the value of the company name (Davis & Stern, 1980), and a higher level of concern for the community in which it operates (Astrachan, 1988). Family firms thus have at least one advantage over retail jewelry chains in the arena of reputation by the very nature of their ownership structure. The key, then, becomes maintenance.

Another implication for family firms generated by this study is that developing a broader strategic perspective can positively impact firm performance. Further, resources can be developed within the firm to expand that perspective. A key example of this lies in the finding that information processing by top managers in the firm had a positive impact on strategic perspective. Family firms that involve the top management team (even if that is just one other person) in meaningful dialogue about strategic issues are better able to identify and capitalize on opportunities. The significant relationship between the control variable size and strategic perspective indicates that this is an easier process for larger firms. It is no less important for smaller family firms. Family firms with broader perspective, as the findings in this sample suggest, are able to perceive a

wider array of opportunities and are thus able to engage in strategies tailored to those opportunities.

It is also important for family firms to understand that some resources are not as critical to family firm success as others. The results here suggest that financial resources are not as critical to family firm success as other resources. This may be due in part to the financing preferences of family firm managers for internally generated funds. It could be a factor of cost structures for these firms. Family members may be willing to substitute “sweat equity” for more employees and the associated costs of those employees. It may also be a function of industry. For example, if a major use for firm funds is maintaining inventory, there are options that enable jewelers to hold reduced inventories while still offering an acceptable level of selection for customers. Similarly, location was not shown to influence the breadth of a firm’s strategic perspective. Customers view jewelry purchases as shopping or specialty goods. Location is not as critical to them as confidence in the firms from which they purchase.

Limitations

As is the case with all empirical research, several practical constraints were encountered here that limit the interpretation of its results. However, these concerns afford opportunity for further research. The remainder of this discussion will focus on the limitations in this study.

A key area of concern regarding the sample generated for this project is sample size. A 7% response rate raises questions about the validity of the study’s conclusions even among family jewelry stores. This concern is somewhat assuaged by tests which

concluded that non-response bias was not present. A sample of 100 – 200 firms would have provided an ideal foundation on which to base conclusions of this study. However, structural equation experts have stated that a 5:1 sample size/parameters ratio is generally sufficient to achieve reliable estimates (Bentler, 1995; Hair et al., 1995). For this study, the sample size thus required was 60 and the sample size generated was 83. In sum, while generalizability remains an issue, there is reason to believe these findings are reliable for this sample.

Another concern lies in operationalization of some of the variables studied. A contribution of this study is its application of strategic management theory, specifically the resource-based view, in the context of family business, a field that acknowledges its current atheoretical state. Measures were based on their previous usage and acceptance in the strategic management literature. Results suggest, however, that substantive differences exist between family firms and those traditionally studied in strategic management. Although the measures used here generated significant and interesting results, assessing factors with measures tailored more specifically to family firms or drawn from other literatures might have led to even greater understanding of resources, strategy, and performance. This offers a valuable opportunity to extend the integration of strategic management and the family business literatures.

More specifically, if family firms are believed to prefer internal financing or have different outcome preferences, then measures that capture these more adequately are needed. For example, the firm's debt and current ratios might not tell as much about the financial resources of a family firm as the level of retained earnings or owner

capitalization. In the same vein, post hoc analysis suggested that jewelry stores carry shopping and specialty goods, and thus location may not be as critical a resource. It may be that other research streams could have better informed the operationalization of physical resources.

The findings reported here must also be interpreted in the context of a single industry and ownership structure. The conditions operating in the retail jewelry trade may impact the resource configurations of its firms uniquely. Similarly, resource configurations may reflect preferences consistent with both family and business concerns, and thus differ from the resource configurations of firms focused solely on business operations. Future research should be undertaken to examine the resource configurations and resulting influences on strategy and performance for family firms operating in different industries and how this differs from non-family firms.

Finally, the causal relations demonstrated here must be interpreted with caution. Although covariance structure analysis was the chosen methodology for this research, the study used cross-sectional data. In order to better understand the causal mechanisms underlying the links between resources, strategy, and performance, future research should incorporate panel designs and longitudinal data.

Conclusions

This dissertation developed and tested a comprehensive model of resources, strategy and performance. Through the use of this holistic approach, greater insight into the nature of resource configurations, their impact on strategic perspective, and ultimately performance, has been gained. Results generally supported the resource-

based view of the firm, thus validating its usefulness as theoretical base for the study of family firms. Further, the findings of this study strengthen our understanding of the family firm. Finally, it is important to understand that the research herein represents a first step. It is believed that this project strongly indicates the need and desirability of further study of family firms utilizing the rich tradition of strategic management.

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APPENDIX



LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE
Department of Management • E. J. Ourso College of Business Administration

HELP ENHANCE YOUR COMPANY'S RESOURCES AND PERFORMANCE

I am a doctoral candidate in the final phases of my dissertation. My field of study is the effects of a company's resources - things like location, people, and reputation - on its performance. I have chosen to study your market segment, retail jewelry stores, because no research has been carried out to help you, the retailer, better understand the forces that contribute to your success. Through my study, I intend to identify which resources (location, people, etc.) have the greatest impact on performance and how different resources work together.

Practically speaking, I will be able to give you an idea of which resources are most valuable to performance and should be actively developed. Further, I will be able to demonstrate how business contacts enhance company resources and ultimately, performance.

To gain this information, I need your help! Please complete the enclosed survey and return it in the envelope provided. I would also appreciate another key executive completing the second survey and returning it in the additional envelope. All information will be held in the strictest confidence, as has always been the policy of University sponsored research. When the results from my dissertation are published it will be impossible to identify an individual person or company.

The survey only takes about 20 minutes to complete. In exchange for your time, I will send an executive summary of my findings to those returning completed surveys, giving you usable information to help guide your company to better resource utilization.

Thank you for your help.

Janet B. Runge
Doctoral Candidate

Business Resources Research Survey

1. Would you categorize your company as a Family Business? ____ Yes ____ No
2. How many family members are actively employed by the company? _____
3. How many family members are members of top management of the company? _____
4. How many full-time employees (including family members) work for your company? _____
5. How many part-time employees (including family members) work for your organization? _____
6. What is your position in the company? _____

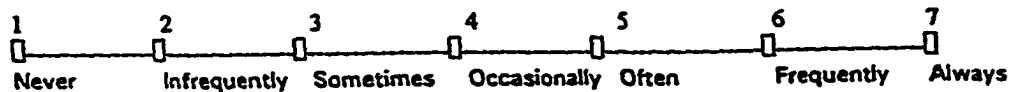
In this section, please record the average number of hours per week that you spend in contact with individuals from each of these groups, and the number of individuals from each group you communicated with.

<u>CONTACT GROUPS</u>	<u>HOURS SPENT IN CONTACT</u>	<u>NUMBER OF CONTACTS</u>
7. Customers/Clients	_____	_____
8. Suppliers/Vendors	_____	_____
9. Potential Employees	_____	_____
10. Consultants	_____	_____
11. Business/Trade Association	_____	_____
12. Regulators/Union	_____	_____
13. Stockholders/Creditors	_____	_____
14. Competitors	_____	_____
15. Other (not specified)	_____	_____
16. Numbers of Hours worked per week	_____	

This section addresses the role of top managers in your company.

17. How many people in your company are top management decision makers? _____

Please use the scale below to answer the following question:



Question	#
18. Are procedures and work instructions followed when the top management team addresses a strategic issue?	
19. Can decision making by this top management team be characterized as participative?	

Question	#
20. Do the individuals on this team interact with each other on an informal basis?	
21. Can decision-making by the top management team be characterized as interactive?	
22. Are committees regularly formed to deal with strategic issues?	
23. Do all members of the team participate in strategic decision-making on a regular basis?	
24. Can decision making by this top management team be characterized as interactive?	
25. Do one or two top management team members dominate the handling of strategic issues?	
26. Is there a free and open exchange of ideas among group members about any strategic issue?	

The questions in this section address your firm's financial resources.

Please indicate the percentage degree of change over the last three years in the following measures of your company's financial resources:

27. Please estimate your current debt/equity ratio, the level of Debt divided by Equity and Retained Earnings. _____
28. Is this an increase or decrease from three years ago? _____
29. Please estimate how much? _____%
30. Please approximate your current ratio, Current Assets divided by Current Liabilities. _____
31. Is this an increase or decrease from three years ago? _____
32. Please estimate how much? _____%

This section addresses information about innovation in your company.

Using the following scale, to what degree have the following activities been carried out within your company:

1 2 3 4 5
☐ ☐ ☐ ☐ ☐
 Never Seldom Occasionally Frequently Very Often

Question	#
33. Implementation of new planning and control systems	
34. Creation of new departments or positions	
35. Offering new product lines or services	

Question	#
36. Developing systems for training, development, and promotion of managers	
37. Targeting new markets or segments	
38. Creation of products/services for the market before other competitors do so	

This section deals with your company's reputation.

39. Please indicate the total of your company's cash donations to charitable causes over the past year. _____
40. Please indicate the monetary value of your company's merchandise donations to charitable causes over the past year. _____
41. What is the average price of a diamond solitaire engagement ring sold by your company? _____
42. On the following scale, please circle your perception of your company's reputation within the community?

1 2 3 4 5

☐ ☐ ☐ ☐ ☐

Very Low Low Indifferent Good Excellent

This section addresses the ongoing, long term strategic perspective of your company.

Please rate the following statements from 1 to 7, circling the number that applies:

43. In general, the top managers in my company favor:

1 2 3 4 5 6 7

☐ ☐ ☐ ☐ ☐ ☐ ☐

A strong emphasis on A strong emphasis on R&D
marketing tried and true technological leadership and
products and services innovations

44. How many new lines of products or services has your firm marketed in the last three years?

1 2 3 4 5 6 7

☐ ☐ ☐ ☐ ☐ ☐ ☐

No New Lines Very Many New Lines

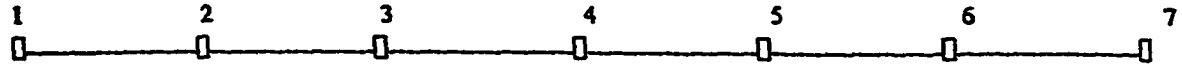
45. What types of changes to products/services have been made in the last three years?

1 2 3 4 5 6 7

☐ ☐ ☐ ☐ ☐ ☐ ☐

Changes in product/service Changes in lines
lines have been mostly minor have been dramatic

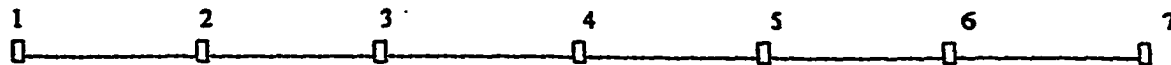
46. In dealing with competitors, my firm...



Typically responds to actions initiated by competitors

Typically initiates actions which competitors respond to

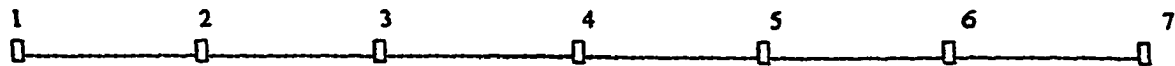
47. In dealing with competitors, my firm...



Is very seldom the first to offer new products, services, administrative techniques, etc.

Is often the first to offer new products, services, administrative techniques, etc.

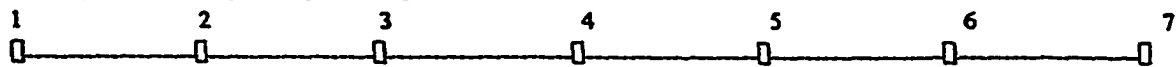
48. In dealing with competitors, my firm...



Typically seeks to avoid competitive clashes prefers 'live and let live' posture

Typically adopts a very 'Undo-the-competition' posture.

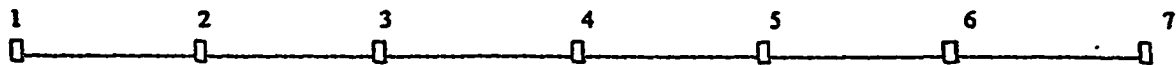
49. In general, the top managers of my firm have:



A strong proclivity for low-risk projects with normal, certain returns

A strong proclivity for high-risk projects with chances for high returns

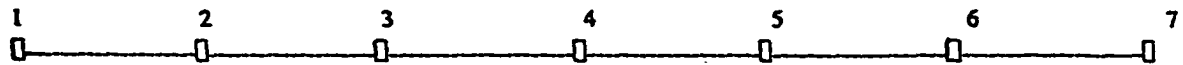
50. In general the top managers of my firm believe that:



Owing to the nature of the environment it is best to explore gradually through incremental behavior

Owing to the nature of the environment, bold wide-ranging acts are needed to achieve firm objectives.

51. When confronted with decision-making situations involving uncertainty, my firm:



Typically adopts a cautious 'wait and see' posture to minimize the probability of making costly decisions.

Typically adopts a bold, aggressive posture to maximize the probability of exploiting potential opportunities

This section addresses your company's performance

In this section, please indicate which scale items most reflects various aspects of your company's financial performance.

- ☐ Decreasing
- ☐ Holding its own
- ☐ Slight Increase
- ☐ Moderate Increase
- ☐ Significant Increase
- ☐ Rapid Increase

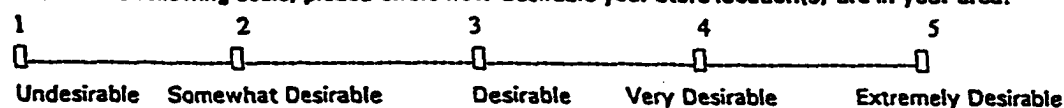
- ☐ Less than 25k
☐ 25k - 50k
☐ 50k - 100k
☐ 100k - 250k
☐ 250k - 500k
☐ Above 500k

This section deals with your company's physical resources.

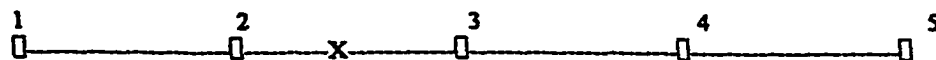
58. How many stores does your company operate? _____

59. What is the average square footage of your store locations? _____

60. On the following scale, please circle how desirable your store location(s) are in your area?



Please place an "X" along each scale marking the degree to which these conditions are present in your store locations: For example:



1 2 3 4 5

Dimly Lit Brightly Lit

1 2 3 4 5

No Music Loud Music

63. 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
Cold Hot
64. 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
Cramped Uncramped
65. 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
Spacious Confined
66. 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
Formal Environment Informal Environment
67. 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
No Computerization High Computerization

The following section addresses the structure of your company.

Please check all choices that apply:

68. Information booklets are given to:

- ☐ None
☐ Few employees
☐ Many employees
☐ All employees

69. Number of information

- ☐ None
☐ One
☐ Two
☐ Three
☐ Four or more

70. Organization chart given to:

- ☐ None
☐ CEO only
☐ CEO + one other executive
☐ CEO + all/most dept. heads

71. Written operating instructions:

☐ For low level employees
☐ For line supervisors
☐ For staff managers
☐ For CEO

72. Written job descriptions:

☐ For low level employees
☐ For line supervisors
☐ For line supervisors
☐ For CEO

73. Manual of procedures:

☐ For low level employees
☐ For line supervisors
☐ For staff managers
☐ For CEO

74. Written Policies:

☐ For low level employees
☐ For line supervisors
☐ For staff managers
☐ For CEO

75. Workflow schedules:

☐ For low level employees
☐ For line supervisors
☐ For staff managers
☐ For CEO

76. Written research reports:

☐ For low level employees
☐ For line supervisors
☐ For staff managers
☐ For CEO

Please check which decisions are made by upper-level managers within the company:

- | | |
|--|---|
| 77. Supervisory establishment. <input type="checkbox"/> | 78. Appointment of supervisors from outside the firm. <input type="checkbox"/> |
| 79. Promotion of supervisory staff. <input type="checkbox"/> | 80. To determine marketing territories to be covered. <input type="checkbox"/> |
| 81. Dismiss a supervisor. <input type="checkbox"/> | 82. To spend unbudgeted or unallocated money. <input type="checkbox"/> |
| 83. Buying procedures. <input type="checkbox"/> | 84. What type or brand new equipment is to be. <input type="checkbox"/> |
| 85. Salaries of supervisory staff. <input type="checkbox"/> | 86. To determine a new product or service. <input type="checkbox"/> |
| 87. What shall be inspected. <input type="checkbox"/> | 88. The extent and type of market to be targeted. <input type="checkbox"/> |
| 89. Training methods to be used. <input type="checkbox"/> | 90. What/ how many employee spaces are to be provided. <input type="checkbox"/> |
| 91. Which suppliers to be used. <input type="checkbox"/> | 92. What operations will be studied. <input type="checkbox"/> |
| 93. The price of merchandise. <input type="checkbox"/> | 94. To alter responsibilities of departments. <input type="checkbox"/> |
| 95. To create a new department. <input type="checkbox"/> | 96. To alter responsibilities of departments. <input type="checkbox"/> |
| 97. To create a new job. <input type="checkbox"/> | |

VITA

Janet B. Runge received a Bachelor of Public Administration from Loyola University in New Orleans in 1982 and a Masters of Business Administration from the University of New Orleans in 1984. She completed her Doctor of Philosophy in Business Administration from Louisiana State University in 1998 and is currently an Assistant Professor at the University of Nevada Las Vegas. Her research interests include entrepreneurship, family business, strategic management, and international business.


DOCTORAL EXAMINATION AND DISSERTATION REPORT

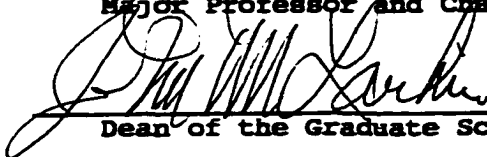
Candidate: Janet B. Runge

Major Field: Business Administration (Management)

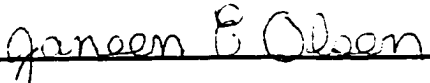
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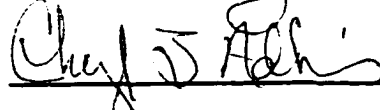

Major Professor and Chairman

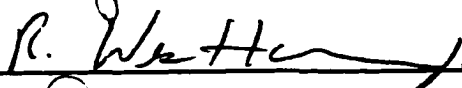

Dean of the Graduate School

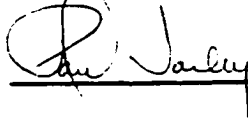
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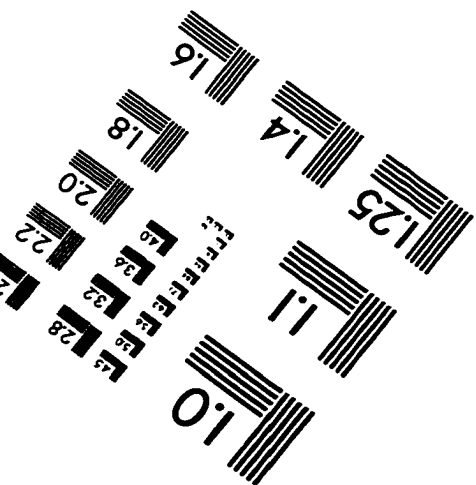
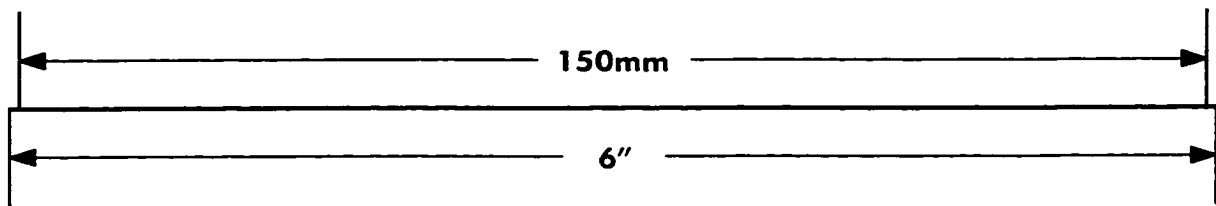
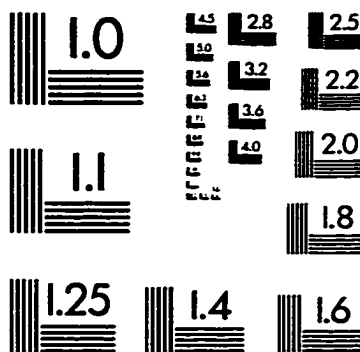
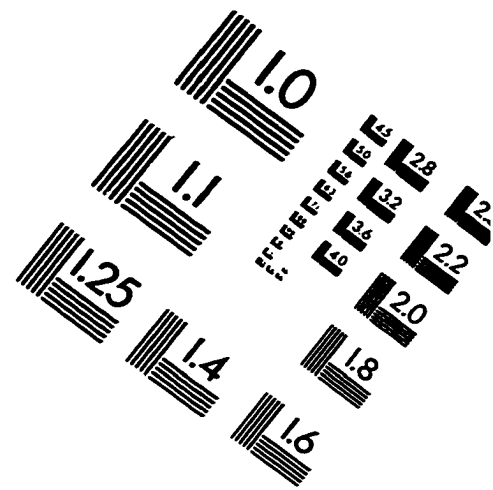
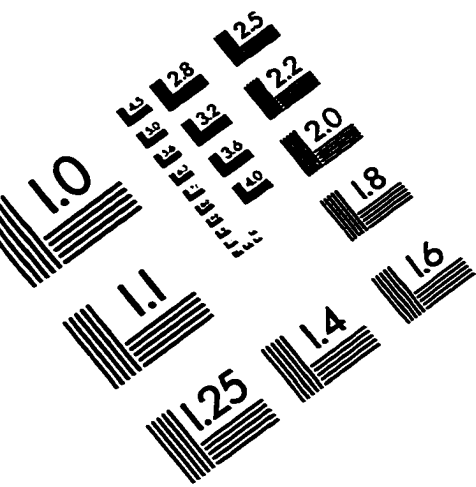

R. W. H. H. H.


Paul J. J. J.

Date of Examination:

October 16, 1998

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